

INVENTOR SEARCH

=> fil casre; d que nos 145; fil capl;d que nos 130; dup rem 145,130
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FILE CONTENT:1840 - 7 Jul 2007 VOL 147 ISS 3

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*      CASREACT now has more than 12 million reactions      *
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L5          STR
L8          7723 SEA FILE=REGISTRY SSS FUL L5
L40         684 SEA FILE=CASREACT ABB=ON  L8
L41         8 SEA FILE=CASREACT ABB=ON  SUMINO M?/AU
L42         3 SEA FILE=CASREACT ABB=ON  FUKASAWA K?/AU
L43         2 SEA FILE=CASREACT ABB=ON  IMAZEKI S?/AU
L44         410 SEA FILE=CASREACT ABB=ON  WATANABE T?/AU
L45         1 SEA FILE=CASREACT ABB=ON  (L41 OR L42 OR L43 OR L44) AND L40
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FILE COVERS 1907 - 10 Jul 2007 VOL 147 ISS 3
 FILE LAST UPDATED: 9 Jul 2007 (20070709/ED)

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L8          7723 SEA FILE=REGISTRY SSS FUL L5
L9          STR
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L13         4006 SEA FILE=REGISTRY ABB=ON  L8 NOT L12
L14         664 SEA FILE=CAPLUS ABB=ON  L13/P
L15         3586 SEA FILE=CAPLUS ABB=ON  L12
L17         1113 SEA FILE=CAPLUS ABB=ON  L15(L) RACT/RL
L18         206 SEA FILE=CAPLUS ABB=ON  L17 AND L14
L24         138 SEA FILE=CAPLUS ABB=ON  SUMINO M?/AU
L25         255 SEA FILE=CAPLUS ABB=ON  FUKASAWA K?/AU
L26         102 SEA FILE=CAPLUS ABB=ON  IMAZEKI S?/AU
L27         21673 SEA FILE=CAPLUS ABB=ON  WATANABE T?/AU
L29         8 SEA FILE=CAPLUS ABB=ON  (L24 OR L25 OR L26 OR L27) AND L18
L30         8 SEA FILE=CAPLUS ABB=ON  (L29 OR L1)
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PROCESSING COMPLETED FOR L45
PROCESSING COMPLETED FOR L30

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L50          8 DUP REM L45 L30 (1 DUPLICATE REMOVED)
              ANSWER '1' FROM FILE CASREACT
              ANSWERS '2-8' FROM FILE CAPLUS
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=> d iall 1; d ibib ed abs hitstr hitind 2-8

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L50 ANSWER 1 OF 8 CASREACT COPYRIGHT 2007 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 141:243157 CASREACT Full-text
TITLE:           Facile method for the preparation of triarylsulfonium
                  bromides using grignard reagents and
                  chlorotrimethylsilane as an activator
AUTHOR(S):       Imazeki, Shigeaki; Sumino, Motoshige
                  ; Fukasawa, Kazuhito; Ishihara, Masami;
                  Akiyama, Takahiko
CORPORATE SOURCE: Chemical Products Research Laboratories, Wako Pure
                  Chemical Industries, Ltd., Kawagoe, 350-1101, Japan
SOURCE:          Synthesis (2004), (10), 1648-1654
                  CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER:       Georg Thieme Verlag
DOCUMENT TYPE:    Journal
LANGUAGE:         English
CLASSIFICATION:   25-22 (Benzene, Its' Derivatives, and Condensed
                  Benzenoid Compounds)
```

ABSTRACT:

Triarylsulfonium bromides were synthesized by the reaction of diaryl sulfoxides with aryl Grignard reagents in the presence of TMSCI followed by treatment with HBr aqueous solution. Trimethylsilyl chloride as activator is readily available and easier to handle than triethyloxonium tetrafluoroborate(1-) or trifluoromethanesulfonic acid trimethylsilyl ester. Triarylsulfonium bromides bearing three identical substituents on sulfur atom were synthesized by the treatment of di-Me sulfite or thionyl chloride with 5 equiv of Grignard reagent in the presence of TMSCI.

SUPPL. TERM: chlorotrimethylsilane aryl sulfonium prepn Grignard sulfoxide; sulfite sulfoxide chlorotrimethylsilane aryl sulfonium prepn Grignard; thionyl chloride sulfoxide chlorotrimethylsilane aryl sulfonium prepn Grignard

INDEX TERM: Sulfoxides
 ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (aryl; preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: Sulfonium compounds
 ROLE: SPN (Synthetic preparation); PREP (Preparation)
 (aryl; preparation of triarylsulfonium bromides using Grignard reagents and thionyl chloride as reactants and chlorotrimethylsilane as activator)

INDEX TERM: Grignard reagents
 ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: Aromatic compounds
 ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (sulfoxides; preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 2857-97-8, Bromotrimethylsilane
 ROLE: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromide using Grignard reagent and diaryl sulfoxide as reactants and bromotrimethylsilane as activator)

INDEX TERM: 768-33-2, Chlorodimethyl(phenyl)silane
 ROLE: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromide using Grignard reagent and diaryl sulfoxide as reactants and chlorodimethyl(phenyl)silane as activator)

INDEX TERM: 76-86-8, Chlorotriphenylsilane
 ROLE: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromide using Grignard reagent and diaryl sulfoxide as reactants and chlorotriphenylsilane as activator)

INDEX TERM: 16029-98-4, Iodotrimethylsilane
 ROLE: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromide using Grignard reagent and diaryl sulfoxide as reactants and iodotrimethylsilane as activator)

INDEX TERM: 603-35-0, Triphenylphosphine, reactions
 ROLE: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromide using Grignard reagent and diaryl sulfoxide as reactants and

triphenylphosphine as activator)
INDEX TERM: 616-42-2, Dimethyl sulfite
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triarylsulfonium bromides using Grignard reagents and di-Me sulfite as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 3744-11-4P 54007-94-2P 469912-73-0P 469912-74-1P
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of triarylsulfonium bromides using Grignard reagents and di-Me sulfite or thionyl chloride as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 4294-57-9P, (4-Methylphenyl)magnesium bromide
ROLE: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 100-58-3, (Phenyl)magnesium bromide 352-13-6,
(4-Fluorophenyl)magnesium bromide 395-25-5,
Bis(4-fluorophenyl) sulfoxide 402-51-7,
Bromo[4-(Trifluoromethyl)phenyl]magnesium 873-77-8,
(4-Chlorophenyl)magnesium bromide 932-31-0,
(2-Methylphenyl)magnesium bromide 945-51-7,
1,1'-Sulfinylbis[benzene] 1774-34-1, Bis(4-hydroxyphenyl) sulfoxide 1774-35-2, Bis(4-methylphenyl) sulfoxide 1774-36-3, Bis(4-methoxyphenyl) sulfoxide 3085-42-5, Bis(4-chlorophenyl) sulfoxide 13139-86-1, (4-Methoxyphenyl)magnesium bromide 18620-04-7, [4-(Methylthio)phenyl]magnesium bromide 28987-79-3, (3-Methylphenyl)magnesium bromide 36282-40-3, (3-Methoxyphenyl)magnesium bromide 63488-10-8, [4-(1,1-Dimethylethyl)phenyl]magnesium bromide 91815-55-3 105580-09-4 185416-17-5 208389-46-2, [4-(Cyclohexyl)phenyl]magnesium bromide
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 75-77-4, Chlorotrimethylsilane, reactions
ROLE: RGT (Reagent); RACT (Reactant or reagent)
(preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 3353-89-7P, Triphenylsulfonium bromide 4189-82-6P
258872-06-9P 347841-66-1P 475598-78-8P 475598-82-4P
753025-61-5P 753025-62-6P 753025-64-8P 753025-66-0P
753025-68-2P 753025-70-6P 753025-71-7P 753025-73-9P
753025-75-1P 753025-77-3P 753025-78-4P 753025-80-8P
753025-81-9P 753025-82-0P
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of triarylsulfonium bromides using Grignard reagents and diaryl sulfoxides as reactants and chlorotrimethylsilane as activator)

INDEX TERM: 95-46-5, Benzene, 1-bromo-2-methyl- 104-92-7, Benzene, 1-bromo-4-methoxy- 104-95-0, Benzene, 1-bromo-4-(methylthio)- 106-38-7, 1-Bromo-4-methylbenzene 106-39-8, Benzene, 1-bromo-4-chloro- 108-86-1, Benzene, bromo-, reactions 402-43-7, Benzene, 1-bromo-4-(trifluoromethyl)- 460-00-4, Benzene, 1-bromo-4-fluoro- 591-17-3, Benzene, 1-bromo-3-methyl- 2398-37-0, Benzene,

1-bromo-3-methoxy- 3972-65-4, Benzene,
 1-bromo-4-(1,1-dimethylethyl)- 7719-09-7, Thionyl chloride
 14804-38-7, Benzene, 5-bromo-2-methoxy-1,3-dimethyl-
 25109-28-8, Benzene, 1-bromo-4-cyclohexyl- 39969-57-8,
 Benzene, 1-bromo-4-butoxy-

ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of triarylsulfonium bromides using Grignard
 reagents and thionyl chloride as reactants and
 chlorotrimethylsilane as activator)

INDEX TERM:

3744-09-0P

ROLE: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of triphenylsulfonium iodide using Grignard
 reagent and di-Ph sulfoxide as reactants and
 iodotrimethylsilane as activator)

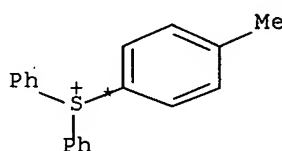
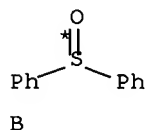
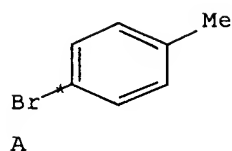
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REFERENCE(S):

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- (2) Andersen, K; J Org Chem 1976, V41, P3096 CAPLUS
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1982, P82
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RX(1) OF 32 A + B ==> C



C
YIELD 85%

RX(1) RCT A 106-38-7

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7
RGT E 75-77-4 Me₃SiCl
CON SUBSTAGE(1) 25+/-5 deg C

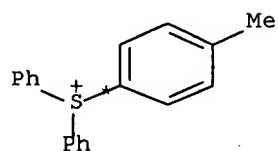
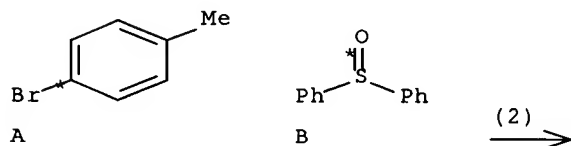
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO C 4189-82-6

NTE optimization study, Grignard reaction, optimized on reagent,
stoichiometry, solvent second stage

RX(2) OF 32 A + B ==> C

● Br⁻C
YIELD 88%

RX(2) RCT A 106-38-7

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7
RGT I 768-33-2 PhMe₂SiCl
CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

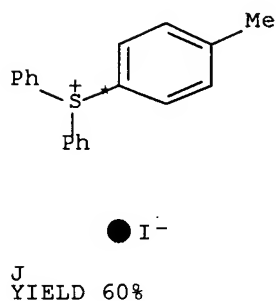
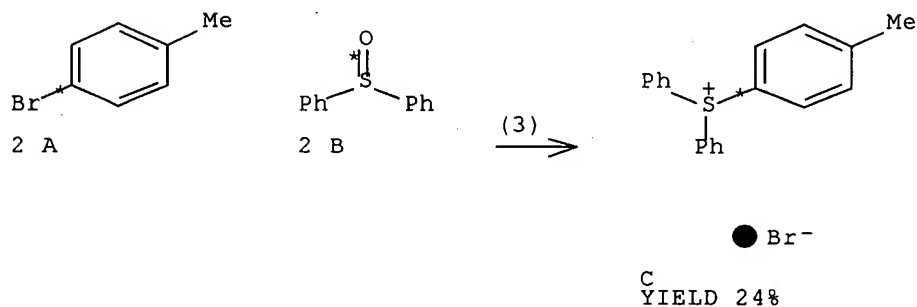
RGT F 10035-10-6 HBr

SOL 7732-18-5 Water
CON room temperature

PRO C 4189-82-6

NTE optimization study, Grignard reaction, optimized on reagent, stoichiometry, solvent second stage

RX(3) OF 32 2 A + 2 B ==> C + J



RX(3) RCT A 106-38-7

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT K 16029-98-4 Me_3SiI

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

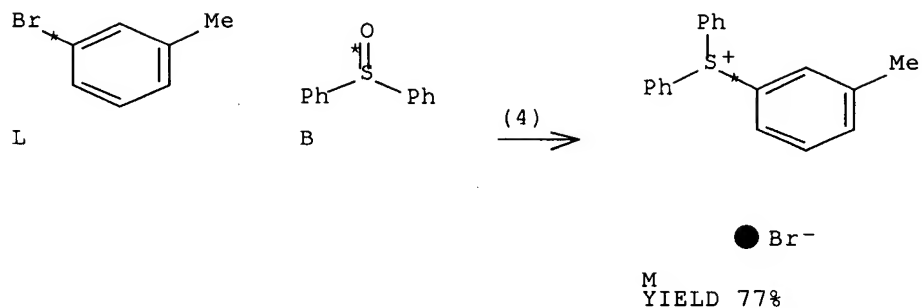
SOL 7732-18-5 Water

CON room temperature

PRO C 4189-82-6, J 3744-09-0

NTE optimization study, Grignard reaction, optimized on reagent, stoichiometry, solvent second stage

RX(4) OF 32 L + B ==> M



RX(4) RCT L 591-17-3

STAGE(1)

 RGT D 7439-95-4 Mg
 SOL 109-99-9 THF

STAGE(2)

 RCT B 945-51-7
 RGT E 75-77-4 Me3SiCl
 CON SUBSTAGE(1) 25+/-5 deg C

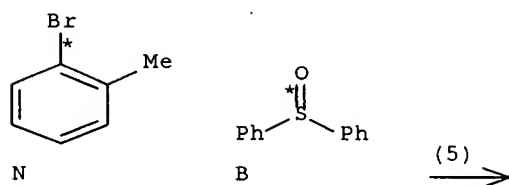
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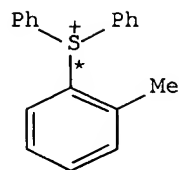
 RGT F 10035-10-6 HBr
 SOL 7732-18-5 Water
 CON room temperature

PRO M 347841-66-1

NTE Grignard reaction

RX(5) OF 32 N + B ==> O





O
YIELD 64%

RX(5) RCT N 95-46-5

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

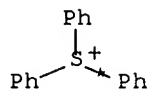
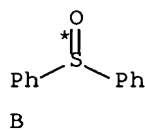
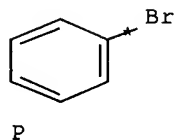
SOL 7732-18-5 Water

CON room temperature

PRO O 753025-61-5

NTE Grignard reaction

RX(6) OF 32 P + B ==> Q



Q
YIELD 87%

RX(6) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

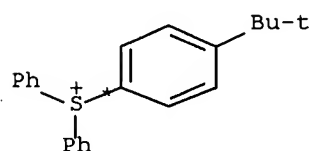
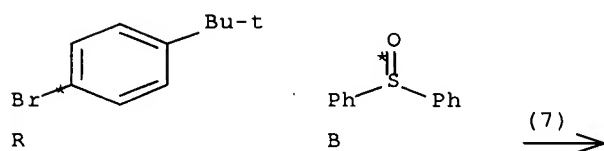
STAGE(3)

RGT F 10035-10-6 HBr
 SOL 7732-18-5 Water
 CON room temperature

PRO Q 3353-89-7

NTE Grignard reaction, alternate preparations also described

RX(7) OF 32 R + B ==> S

● Br⁻

S
 YIELD 79%

RX(7) RCT R 3972-65-4

STAGE(1)

RGT D 7439-95-4 Mg
 SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7
 RGT E 75-77-4 Me₃SiCl
 CON SUBSTAGE(1) 25+/-5 deg C

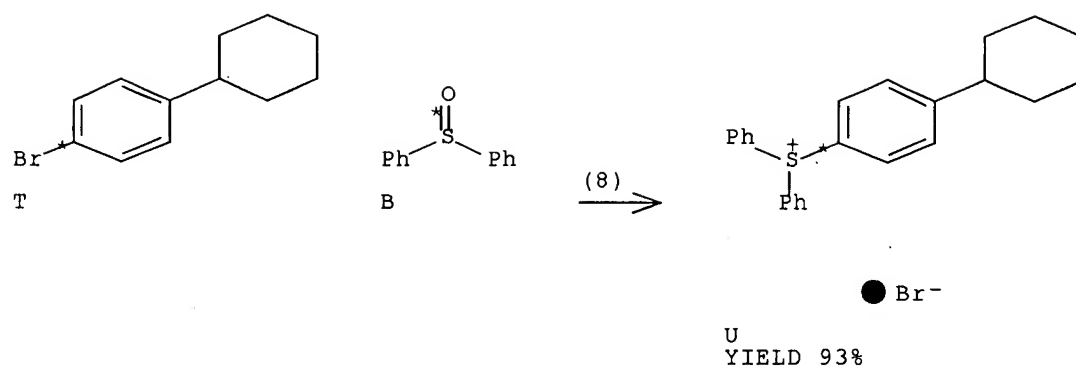
STAGE(3)

RGT F 10035-10-6 HBr
 SOL 7732-18-5 Water
 CON room temperature

PRO S 258872-06-9

NTE Grignard reaction

RX(8) OF 32 T + B ==> U



RX(8) RCT T 25109-28-8

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT E 75-77-4 Me₃SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

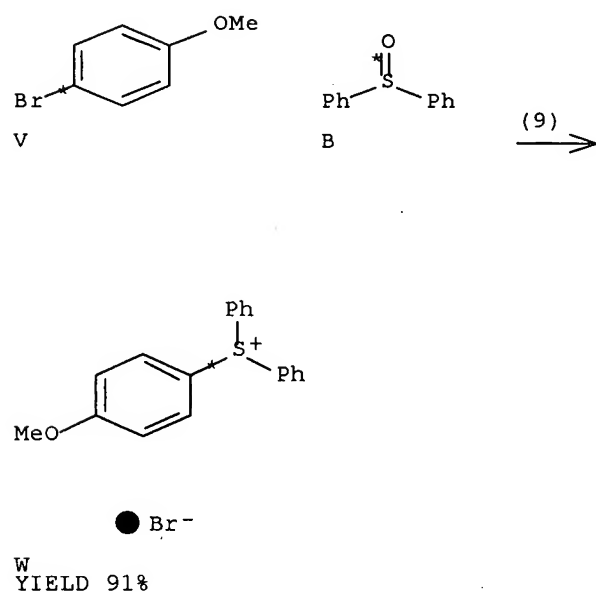
SOL 7732-18-5 Water

CON room temperature

PRO U 753025-62-6

NTE Grignard reaction

RX(9) OF 32 V + B ==> W



RX(9) RCT V 104-92-7

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7
RGT E 75-77-4 Me3SiCl
CON SUBSTAGE(1) 25+/-5 deg C

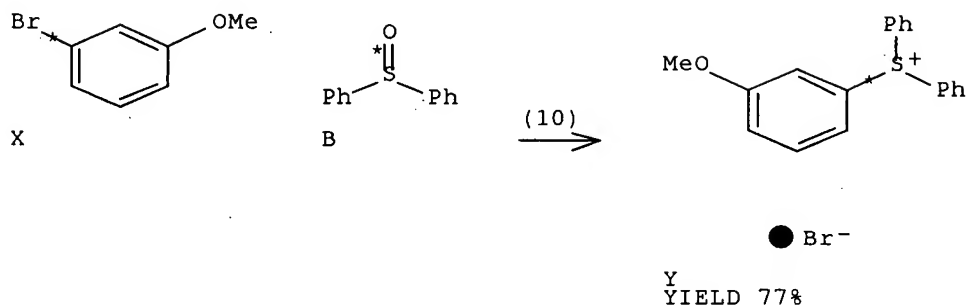
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO W 753025-64-8

NTE Grignard reaction

RX(10) OF 32 X + B ==> Y



RX(10) RCT X 2398-37-0

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7
RGT E 75-77-4 Me3SiCl
CON SUBSTAGE(1) 25+/-5 deg C

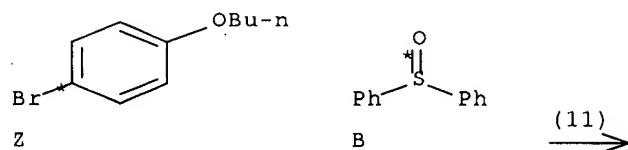
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO Y 753025-66-0

NTE Grignard reaction

RX(11) OF 32 Z + B ==> AA



AA
YIELD 78%

RX(11) RCT Z 39969-57-8

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

SOL 7732-18-5 Water

CON room temperature

PRO AA 753025-68-2

NTE Grignard reaction

RX(12) OF 32 AB + B ==> AC

RX(13) RCT AD 104-95-0

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

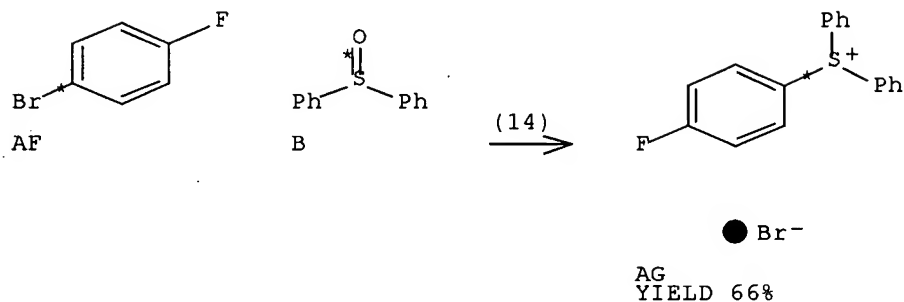
RCT B 945-51-7
RGT E 75-77-4 Me3SiCl
CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO AE 753025-71-7
NTE Grignard reaction

RX(14) OF 32 AF + B ==> AG



RX(14) RCT AF 460-00-4

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

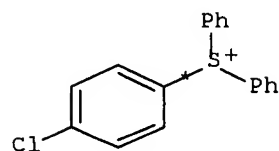
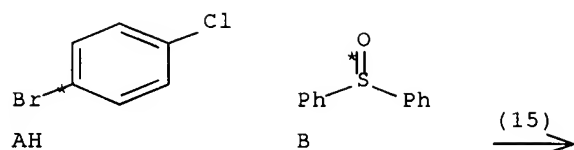
RCT B 945-51-7
RGT E 75-77-4 Me3SiCl
CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO AG 475598-78-8
NTE Grignard reaction

RX(15) OF 32 AH + B ==> AI



AI
YIELD 66%

RX(15) RCT AH 106-39-8

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT B 945-51-7

RGT E 75-77-4 Me₃SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

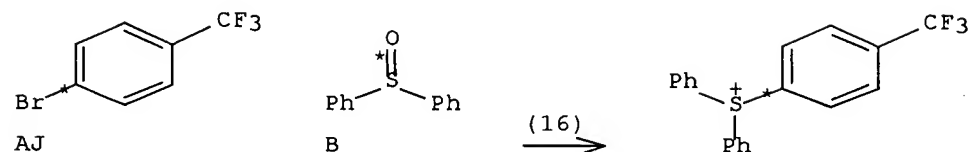
SOL 7732-18-5 Water

CON room temperature

PRO AI 753025-73-9

NTE Grignard reaction

RX(16) OF 32 AJ + B ==> AK



AK
YIELD 72%

RX(16) RCT AJ 402-43-7

STAGE(1)

RGT D 7439-95-4 Mg
SOL 60-29-7 Et2O

STAGE(2)

RCT B 945-51-7
RGT E 75-77-4 Me3SiCl
CON SUBSTAGE(1) 25+/-5 deg C

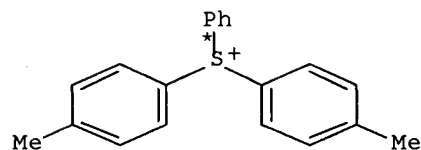
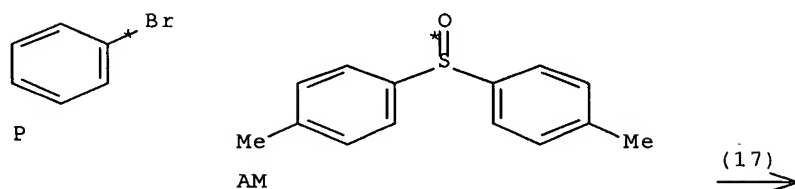
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO AK 753025-75-1

NTE Grignard reaction

RX(17) OF 32 P + AM ==> AN

● Br⁻AN
YIELD 90%

RX(17) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT AM 1774-35-2
RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

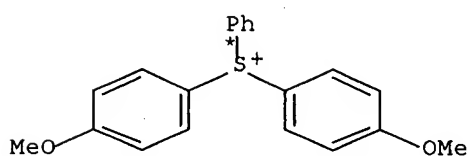
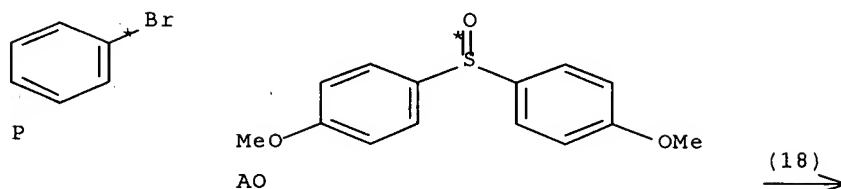
SOL 7732-18-5 Water

CON room temperature

PRO AN 753025-77-3

NTE Grignard reaction

RX(18) OF 32 P + AO ==> AP

AP
YIELD 94%

RX(18) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT AO 1774-36-3

RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

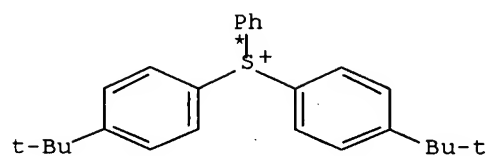
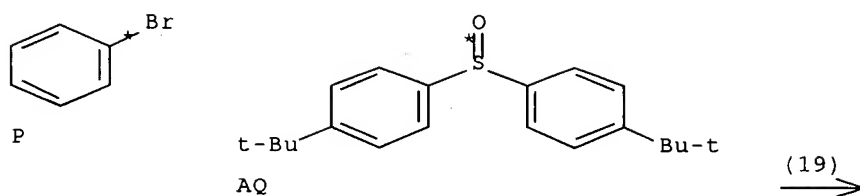
SOL 7732-18-5 Water

CON room temperature

PRO AP 753025-78-4

NTE Grignard reaction

RX(19) OF 32 P + AQ ==> AR



AR
YIELD 91%

RX(19) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT AQ 91815-55-3

RGT E 75-77-4 Me₃SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

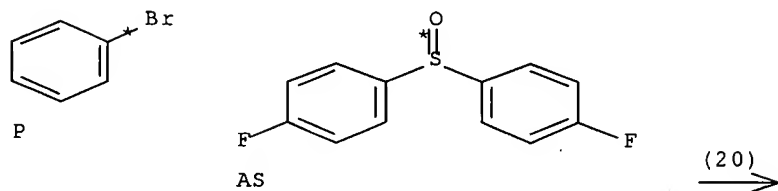
SOL 7732-18-5 Water

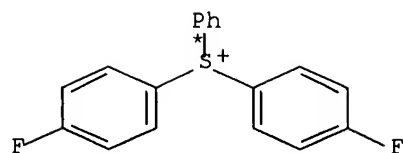
CON room temperature

PRO AR 753025-80-8

NTE Grignard reaction

RX(20) OF 32 P + AS ==> AT





AT
YIELD 72%

RX(20) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT AS 395-25-5

RGT E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

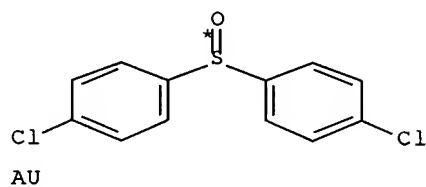
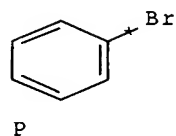
SOL 7732-18-5 Water

CON room temperature

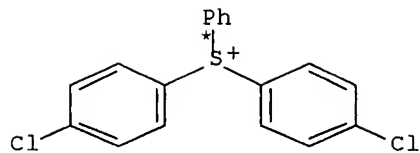
PRO AT 475598-82-4

NTE Grignard reaction

RX(21) OF 32 P + AU ==> AV



(21) →



AV
YIELD 66%

RX(21) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RCT AU 3085-42-5

RGT E 75-77-4 Me₃SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

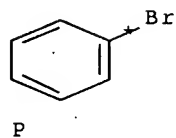
SOL 7732-18-5 Water

CON room temperature

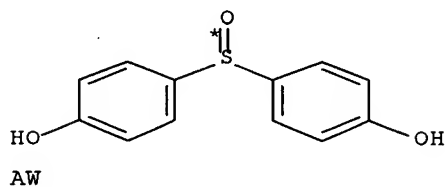
PRO AV 753025-81-9

NTE Grignard reaction

RX(22) OF 32 P + AW ==> AX

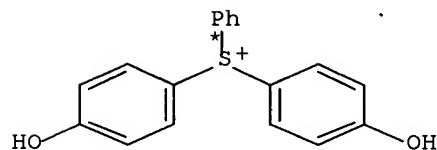


P



AW

(22) →



AX
YIELD 69%

RX(22) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RCT AW 1774-34-1
RGT E 75-77-4 Me₃SiCl
CON SUBSTAGE(1) 25+/-5 deg C

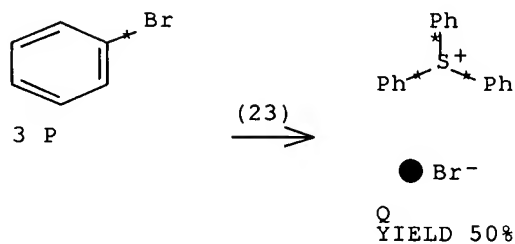
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO AX 753025-82-0

NTE Grignard reaction

RX(23) OF 32 3 P ==> Q



RX(23) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RGT AY 616-42-2 (MeO)₂SO, E 75-77-4 Me₃SiCl
CON SUBSTAGE(1) 25+/-5 deg C

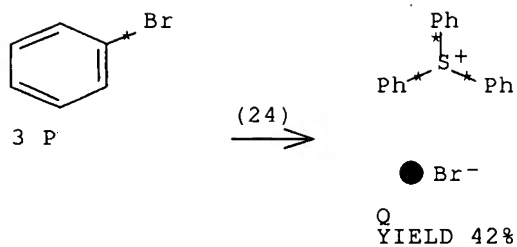
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO Q 3353-89-7

NTE Grignard reaction, alternate preparations also described

RX(24) OF 32 3 P ==> Q



RX(24) RCT P 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RGT E 75-77-4 Me₃SiCl, AZ 7719-09-7 SOCl₂

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

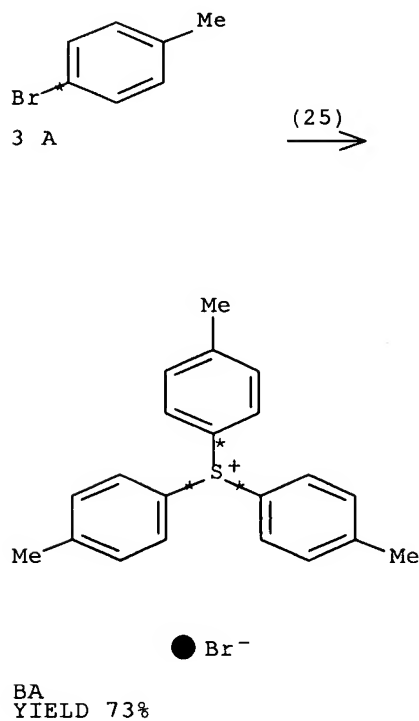
SOL 7732-18-5 Water

CON room temperature

PRO Q 3353-89-7

NTE Grignard reaction, alternate preparations also described

RX(25) OF 32 3 A ==> BA



RX(25) RCT A 106-38-7

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RGT AY 616-42-2 (MeO)2SO, E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

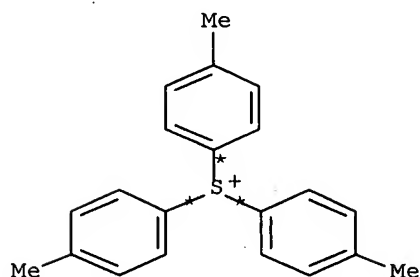
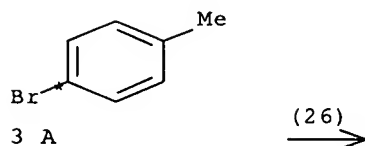
SOL 7732-18-5 Water

CON room temperature

PRO BA 3744-11-4

NTE Grignard reaction, alternate preparation also described

RX(26) OF 32 3 A ==> BA

BA
YIELD 77%

RX(26) RCT A 106-38-7

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RGT E 75-77-4 Me3SiCl, AZ 7719-09-7 SOCl2

CON SUBSTAGE(1) 25+/-5 deg C

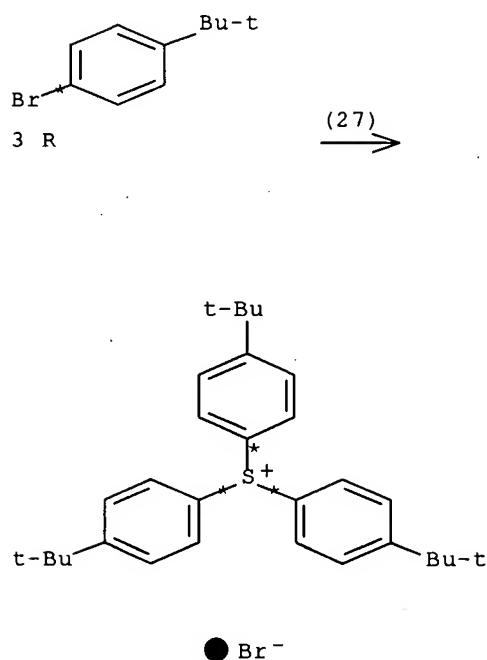
STAGE(3)

RGT F 10035-10-6 HBr
 SOL 7732-18-5 Water
 CON room temperature

PRO BA 3744-11-4

NTE Grignard reaction, alternate preparation also described

RX(27) OF 32 3 R ==> BB



BB
 YIELD 68%

RX(27) RCT R 3972-65-4

STAGE(1)

RGT D 7439-95-4 Mg
 SOL 109-99-9 THF

STAGE(2)

RGT AY 616-42-2 (MeO)₂SO, E 75-77-4 Me₃SiCl
 CON SUBSTAGE(1) 25+/-5 deg C

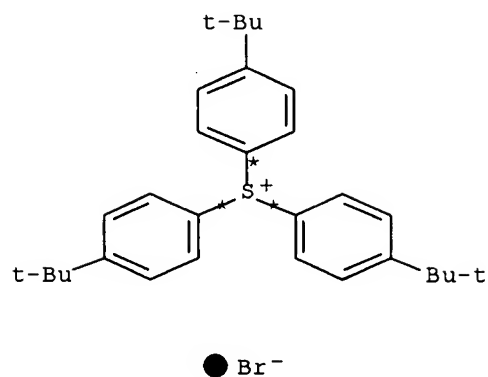
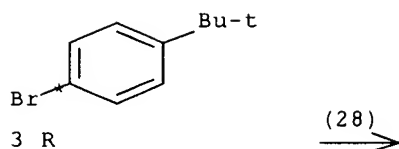
STAGE(3)

RGT F 10035-10-6 HBr
 SOL 7732-18-5 Water
 CON room temperature

PRO BB 469912-73-0

NTE Grignard reaction, alternate preparation also described

RX(28) OF 32 3 R ==> BB



BB
YIELD 68%

RX(28) RCT R 3972-65-4

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RGT E 75-77-4 Me₃SiCl, AZ 7719-09-7 SOCl₂
CON SUBSTAGE(1) 25+/-5 deg C

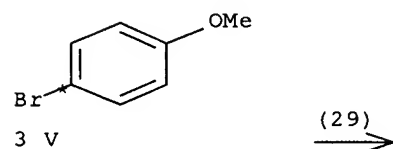
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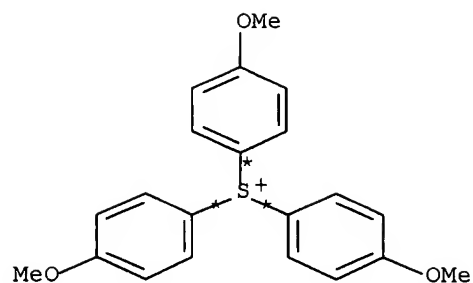
RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO BB 469912-73-0

NTE Grignard reaction, alternate preparation also described

RX(29) OF 32 3 V ==> BC





BC
YIELD 76%

RX(29) RCT V 104-92-7

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RGT AY 616-42-2 (MeO)2SO, E 75-77-4 Me3SiCl

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

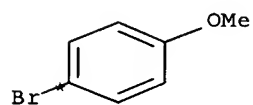
SOL 7732-18-5 Water

CON room temperature

PRO BC 469912-74-1

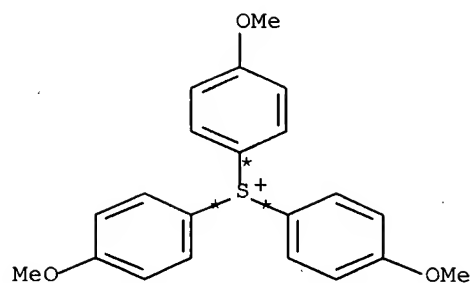
NTE Grignard reaction, alternate preparation also described

RX(30) OF 32 3 V ==> BC



3 V





BC
YIELD 66%

RX(30) RCT V 104-92-7

STAGE(1)

RGT D 7439-95-4 Mg

SOL 109-99-9 THF

STAGE(2)

RGT E 75-77-4 Me3SiCl, AZ 7719-09-7 SOCl2

CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr

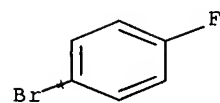
SOL 7732-18-5 Water

CON room temperature

PRO BC 469912-74-1

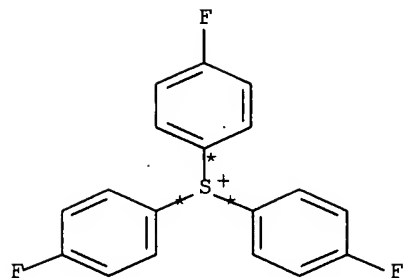
NTE Grignard reaction, alternate preparation also described

RX(31) OF 32 3 AF ==> BD



3 AF





● Br⁻

BD
YIELD 46%

RX(31) RCT AF 460-00-4

STAGE(1)

RGT .D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RGT AY 616-42-2 (MeO)₂SO, E 75-77-4 Me₃SiCl
CON SUBSTAGE(1) 25+/-5 deg C

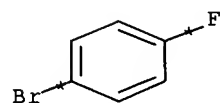
STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO BD 54007-94-2

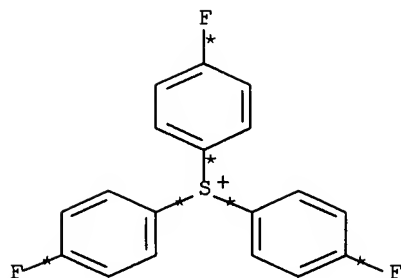
NTE Grignard reaction, alternate preparation also described

RX(32) OF 32 3 AF ==> BD



3 AF

(32)
→



BD
YIELD 51%

RX(32) RCT AF 460-00-4

STAGE(1)

RGT D 7439-95-4 Mg
SOL 109-99-9 THF

STAGE(2)

RGT E 75-77-4 Me3SiCl, AZ 7719-09-7 SOCl2
CON SUBSTAGE(1) 25+/-5 deg C

STAGE(3)

RGT F 10035-10-6 HBr
SOL 7732-18-5 Water
CON room temperature

PRO BD 54007-94-2

NTE Grignard reaction, alternate preparation also described

L50 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:485560 CAPLUS Full-text

DOCUMENT NUMBER: 146:472183

TITLE: Novel photoacid generators such as fluorohydroxyalkyl sulfonate salts and derivatives for resist compositions in immersion lithography patterning process

INVENTOR(S): Kobayashi, Katsuhiko.; Ohsawa, Youichi; Kinsho, Takeshi; Watanabe, Takeru; Ohashi, Masaki

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 51pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1780199	A1	20070502	EP 2006-255508	20061026

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
BA, HR, MK, YU

JP 2007145804 A 20070614 JP 2006-244262 20060908

US 2007099113 A1 20070503 US 2006-588414 20061027

PRIORITY APPLN. INFO.:

JP 2005-316156 A 20051031

ED Entered STN: 04 May 2007

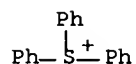
AB Sulfonate salts have the formula: $\text{CF}_3\text{-CH(OH)-CF}_2\text{SO}_3\text{-M}^+$ wherein M^+ is a Li, Na, K, ammonium or tetramethylammonium ion. Because of inclusion within the mol. of a hydroxyl group which is a polar group, the sulfonic acids are effective for restraining the length of acid diffusion through hydrogen bond or the like. The photoacid generators that generate these sulfonic acids perform well during the device fabrication process including coating, pre-baking, exposure, post-exposure baking, and developing steps. The photoacid generators are little affected by water left on the wafer during the ArF immersion lithog.

IT 4270-70-6P 22417-22-7P 199733-54-5P
258872-06-9P 469912-73-0P 868049-02-9P
935279-67-7P 935279-68-8P 935279-69-9P
935279-70-2P 935279-71-3P 935279-77-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photoacid generators such as fluorohydroxyalkyl sulfonate salts and derivs. for ArF immersion lithog. resist compns.)

RN 4270-70-6 CAPLUS

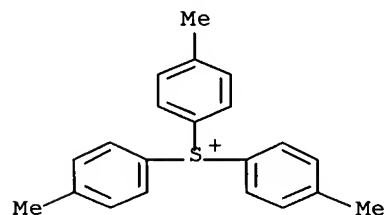
CN Sulfonium, triphenyl-, chloride (1:1) (CA INDEX NAME)



● Cl^-

RN 22417-22-7 CAPLUS

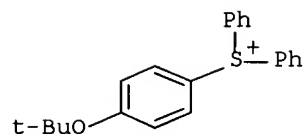
CN Sulfonium, tris(4-methylphenyl)-, chloride (1:1) (CA INDEX NAME)



● Cl^-

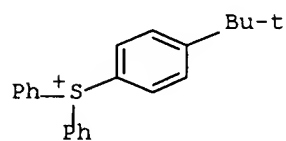
RN 199733-54-5 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, chloride (1:1) (CA INDEX NAME)



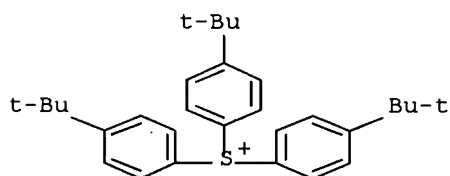
RN 258872-06-9 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, bromide (1:1) (CA INDEX NAME)



RN 469912-73-0 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, bromide (1:1) (CA INDEX NAME)



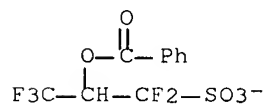
RN 868049-02-9 CAPLUS

CN Sulfonium, triphenyl-, 2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 868048-97-9

CMF C10 H6 F5 O5 S



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ANSWERS '1-18' FROM FILE CASREACT
ANSWERS '19-42' FROM FILE CAPLUS
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D IBIB ED ABS HITSTR HITIND 19-42

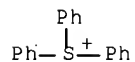
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CM 2

CRN 18393-55-0

CMF C18 H15 S



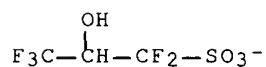
RN 935279-67-7 CAPLUS

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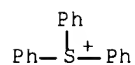
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CM 2

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CMF C18 H15 S



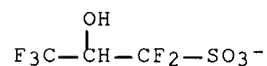
RN 935279-68-8 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, 1,1,3,3,3-pentafluoro-2-hydroxy-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

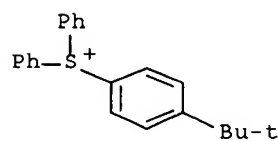
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CM 2

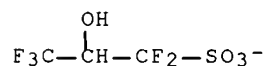
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CMF C22 H23 S



RN 935279-69-9 CAPLUS
CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, 1,1,3,3,3-pentafluoro-2-hydroxy-1-propanesulfonate (1:1) (CA INDEX NAME)

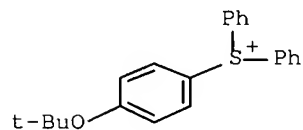
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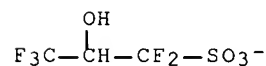
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CMF C22 H23 O S



RN 935279-70-2 CAPLUS
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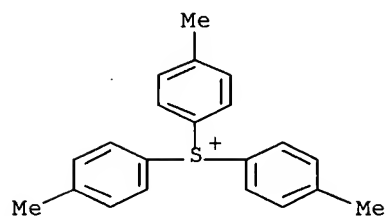
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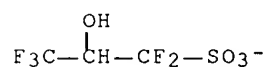
CRN 47197-43-3
CMF C21 H21 S



RN 935279-71-3 CAPLUS
CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,3,3,3-pentafluoro-2-hydroxy-1-propanesulfonate (1:1) (CA INDEX NAME)

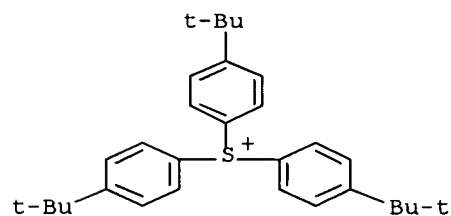
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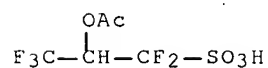
CRN 91815-56-4
CMF C30 H39 S



RN 935279-77-9 CAPLUS
CN Sulfonium, triphenyl-, compd. with 2-(acetyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (CA INDEX NAME)

CM 1

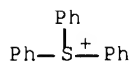
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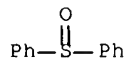
CM 2

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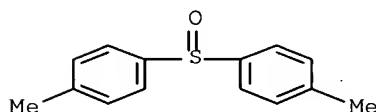
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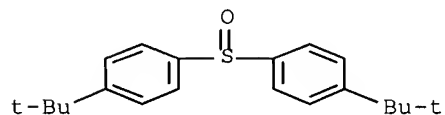
IT 945-51-7, Diphenyl sulfoxide 1774-35-2,
 Bis-(4-methylphenyl) sulfoxide 91815-55-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photoacid generators such as fluorohydroxyalkyl sulfonate salts and
 derivs. for ArF immersion lithog. resist comps.)
 RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)



RN 91815-55-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 IT 4270-70-6P 19158-66-8P 22417-22-7P 61358-24-5P
 122085-43-2P 199733-54-5P 258872-06-9P 364736-20-9P
 370099-19-7P 469912-73-0P 485819-09-8P 795311-98-7P
 795311-99-8P 868049-02-9P 911683-53-9P 911683-54-0P
 935279-67-7P 935279-68-8P 935279-69-9P
 935279-70-2P 935279-71-3P 935279-72-4P 935279-73-5P
 935279-74-6P 935279-75-7P 935279-77-9P 935279-78-0P

935279-79-1P 935279-80-4P 935280-50-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photoacid generators such as fluorohydroxyalkyl sulfonate salts and derivs. for ArF immersion lithog. resist compns.)

IT 70-11-1, Phenacyl bromide 75-77-4, Trimethylsilyl chloride, reactions
 77-78-1, Dimethyl sulfate 98-06-6 100-68-5, Thioanisole 106-43-4,
 4-Chlorotoluene 108-90-7, Chlorobenzene, reactions 110-01-0,
 Tetrahydrothiophene 945-51-7, Diphenyl sulfoxide
 1774-35-2, Bis-(4-methylphenyl) sulfoxide 3972-65-4,
 4-tert-Butylbromobenzene 7631-90-5, Sodium hydrogen sulfite 7758-05-6,
 Potassium iodate 18995-35-2, 4-tert-Butoxychlorobenzene
 91815-55-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(photoacid generators such as fluorohydroxyalkyl sulfonate salts and derivs. for ArF immersion lithog. resist compns.)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:485581 CAPLUS Full-text

DOCUMENT NUMBER: 146:472184

TITLE: Novel fluorosulfonyloxyalkyl sulfonate salts and
 derivatives, photoacid generators, photoresist
 compositions, and microlithographic patterning process

INVENTOR(S): Kobayashi, Katsuhiko; Ohsawa, Youichi; Kinsho,
 Takeshi; Watanabe, Takeru

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 56pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1780198	A1	20070502	EP 2006-255510	20061026
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
JP 2007145803	A	20070614	JP 2006-244193	20060908
US 2007099112	A1	20070503	US 2006-588413	20061027
PRIORITY APPLN. INFO.:			JP 2005-316171	A 20051031

ED Entered STN: 04 May 2007

AB Sulfonate salts have the formula: R1SO3-CH(Rf)-CF2SO3-M+ wherein R1 is alkyl
 or aryl, Rf is H or trifluoromethyl, and M+ is a Li, Na, K, ammonium or
 tetramethylammonium ion. Onium salts, oximesulfonates and sulfonyloxyimides
 and other compds. derived from these sulfonate salts are effective photoacid
 generators in chemical amplified resist compns.

IT 4270-70-6P, Triphenylsulfonium chloride 22417-22-7P

199733-54-5P 469912-73-0P 850345-82-3P

935279-67-7P 935441-94-4P 935441-96-6P

935441-97-7P 935441-98-8P 935442-01-6P

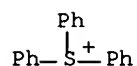
935442-02-7P 935442-04-9P 935442-05-0P

935442-06-1P 935442-08-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

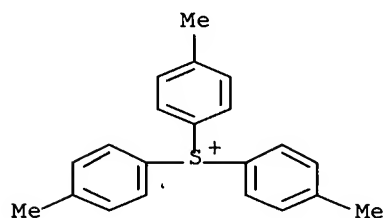
(preparation of fluorosulfonyloxyalkyl sulfonate salt type photoacid generators for resist compns.)

RN 4270-70-6 CAPLUS
 CN Sulfonium, triphenyl-, chloride (1:1) (CA INDEX NAME)



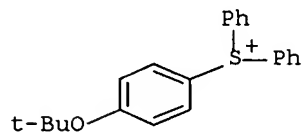
● Cl⁻

RN 22417-22-7 CAPLUS
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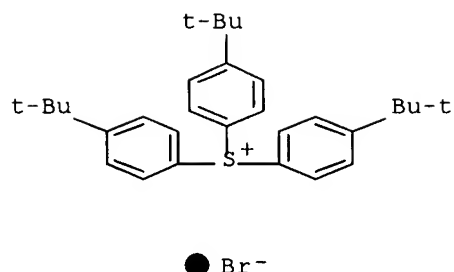
● Cl⁻

RN 199733-54-5 CAPLUS
 CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, chloride (1:1) (CA INDEX NAME)

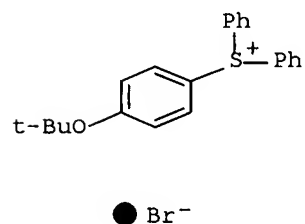


● Cl⁻

RN 469912-73-0 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, bromide (1:1) (CA INDEX NAME)



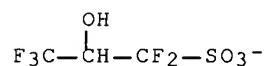
RN 850345-82-3 CAPLUS
 CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, bromide (1:1) (CA INDEX NAME)



RN 935279-67-7 CAPLUS
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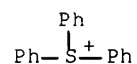
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 CMF C3 H2 F5 O4 S



CM 2

CRN 18393-55-0
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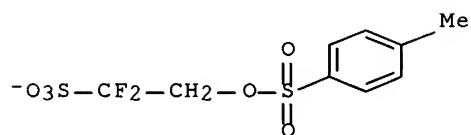


RN 935441-94-4 CAPLUS
 CN Sulfonium, triphenyl-, 1,1-difluoro-2-[[4-(4-methylphenyl)sulfonyl]oxy]ethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 935441-93-3

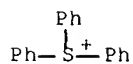
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CM 2

CRN 18393-55-0

CMF C18 H15 S



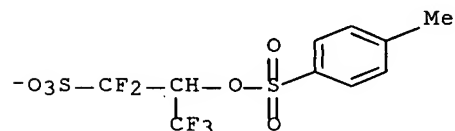
RN 935441-96-6 CAPLUS

CN Sulfonium, triphenyl-, 1,1,3,3,3-pentafluoro-2-[[[4-methylphenyl)sulfonyl]oxy]-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

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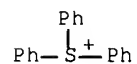
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CM 2

CRN 18393-55-0

CMF C18 H15 S



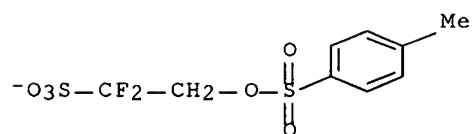
RN 935441-97-7 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, 1,1-difluoro-2-[[[4-methylphenyl)sulfonyl]oxy]ethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 935441-93-3

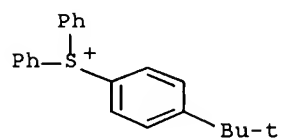
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CM 2

CRN 66482-54-0

CMF C22 H23 S



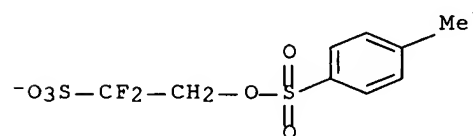
RN 935441-98-8 CAPLUS

CN Sulfonium, tris(4-methylphenyl)-, 1,1-difluoro-2-[[4-methylphenyl)sulfonyl]oxy]ethanesulfonate (1:1) (CA INDEX NAME)

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CRN 935441-93-3

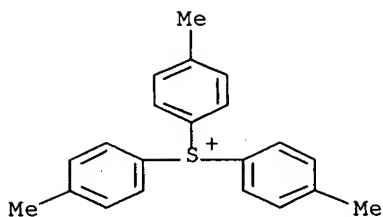
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CRN 47197-43-3

CMF C21 H21 S



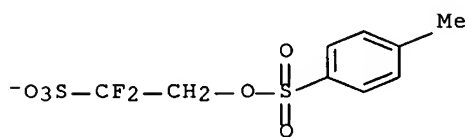
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CM 1

CRN 935441-93-3

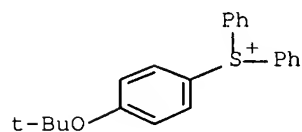
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CM 2

CRN 157089-25-3

CMF C22 H23 O S



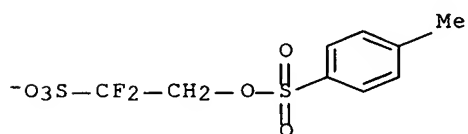
RN 935442-02-7 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1-difluoro-2-[[4-methylphenyl)sulfonyl]oxy]ethanesulfonate (1:1) (CA INDEX NAME)

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CRN 935441-93-3

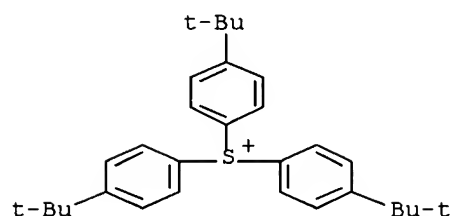
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CM 2

CRN 91815-56-4

CMF C30 H39 S



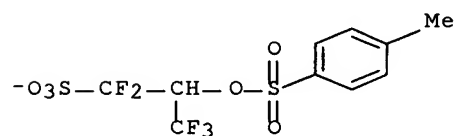
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[[4-methylphenyl)sulfonyl]oxy]-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 935441-95-5

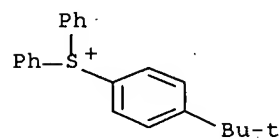
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CM 2

CRN 66482-54-0

CMF C22 H23 S

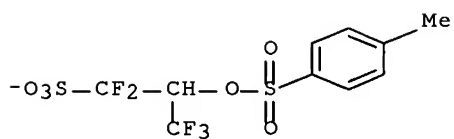


RN 935442-05-0 CAPLUS

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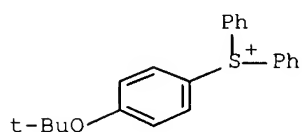
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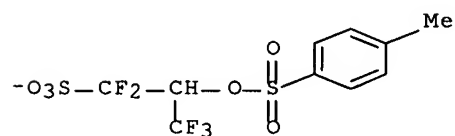
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CMF C22 H23 O S



RN 935442-06-1 CAPLUS
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[[(4-methylphenyl)sulfonyl]oxy]-1-propanesulfonate (1:1) (CA INDEX NAME)

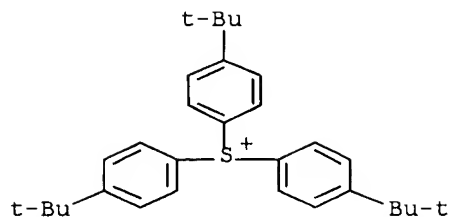
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CRN 935441-95-5
CMF C10 H8 F5 O6 S2



CM 2

CRN 91815-56-4
CMF C30 H39 S



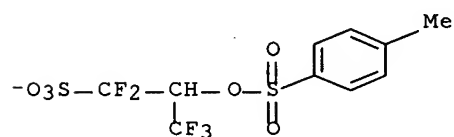
RN 935442-08-3 CAPLUS

CN Sulfonium, tris(4-methylphenyl)-, 1,1,3,3,3-pentafluoro-2-[[4-methylphenyl)sulfonyl]oxy]-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 935441-95-5

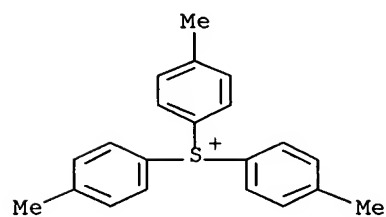
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CM 2

CRN 47197-43-3

CMF C21 H21 S



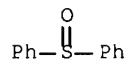
IT 945-51-7, Diphenyl sulfoxide 1774-35-2,
Bis-(4-methylphenyl) sulfoxide 91815-55-3

RL: RCT (Reactant); RACT (Reactant or reagent)

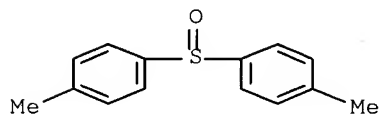
(preparation of fluorosulfonyloxyalkyl sulfonate salt type photoacid
generators for resist compns.)

RN 945-51-7 CAPLUS

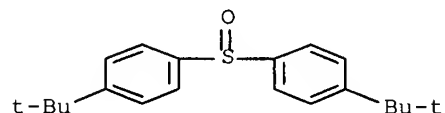
CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)



RN 91815-55-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 4270-70-6P, Triphenylsulfonium chloride 19158-66-8P
 22417-22-7P 61358-24-5P 199733-54-5P 364736-20-9P
 469912-73-0P 850345-82-3P 911683-53-9P
 935279-67-7P 935441-92-2P 935441-94-4P
 935441-96-6P 935441-97-7P 935441-98-8P
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 935442-10-7P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of fluorosulfonyloxyalkyl sulfonate salt type photoacid generators for resist compns.)

IT 70-11-1 75-09-2, Dichloromethane, reactions 75-77-4, Trimethylsilyl chloride, reactions 77-78-1, Dimethyl sulfate 98-06-6 98-59-9, Tosyl chloride 100-68-5, Thioanisole 110-01-0 945-51-7, Diphenyl sulfoxide 1774-35-2, Bis-(4-methylphenyl) sulfoxide 3972-65-4, 4-tert-Butylbromobenzene 7758-05-6, Potassium iodate 18995-35-2, 4-tert-Butoxychlorobenzene 91815-55-3 185739-14-4 868049-02-9 935442-11-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of fluorosulfonyloxyalkyl sulfonate salt type photoacid generators for resist compns.)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:1059433 CAPLUS Full-text
 DOCUMENT NUMBER: 145:429403
 TITLE: Novel sulfonate salts and derivatives, photoacid generators, resist compositions, and patterning process
 INVENTOR(S): Ohsawa, Youichi; Watanabe, Takeru; Kinsho, Katsuhiro; Kobayashi, Katsuhiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 86pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1710230	A1	20061011	EP 2006-251944	20060406
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2007145797	A	20070614	JP 2006-93303	20060330
US 2006228648	A1	20061012	US 2006-397526	20060405
KR 2006107340	A	20061013	KR 2006-30950	20060405
PRIORITY APPLN. INFO.:			JP 2005-109903	A 20050406
			JP 2005-316096	A 20051031

OTHER SOURCE(S): MARPAT 145:429403

ED Entered STN: 12 Oct 2006

AB Sulfonate salts have the formula: CF₃-CH(OCOR)-CF₂SO₃-M⁺ wherein R is C₁-C₂₀ alkyl or C₆-C₁₄ aryl, and M⁺ is a lithium, sodium, potassium, ammonium or tetramethylammonium ion. Onium salts, oximesulfonates and sulfonyloxyimides and other compds. derived from these sulfonate salts are effective photoacid generators in chemical amplified resist compns.

IT 4270-70-6P 22417-22-7P, Tris(4-methylphenyl)sulfonium chloride 258872-06-9P, 4-tert-Butylphenyldiphenylsulfonium bromide 326925-53-5P 469912-73-0P,

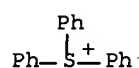
Tris(4-tert-butylphenyl)sulfonium bromide

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(production of sulfonate salts and derivs. useful as photoacid generators for resist compns. and patterning process thereof)

RN 4270-70-6 CAPLUS

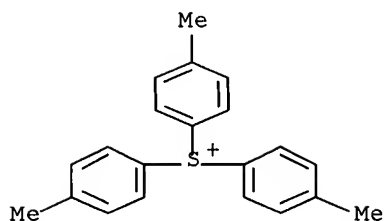
CN Sulfonium, triphenyl-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

RN 22417-22-7 CAPLUS

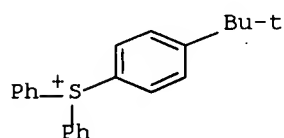
CN Sulfonium, tris(4-methylphenyl)-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

RN 258872-06-9 CAPLUS

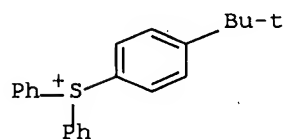
CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, bromide (1:1) (CA INDEX NAME)



● Br⁻

RN 326925-53-5 CAPLUS

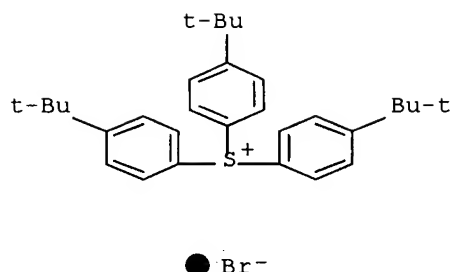
CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 469912-73-0 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, bromide (1:1) (CA INDEX NAME)



IT 868049-02-9P, Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate 911683-59-5P, 4-tert-Butoxyphenyldiphenylsulfonium 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate 911683-98-2P, (4-Hydroxyphenyl)diphenylsulfonium 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(production of sulfonate salts and derivs. useful as photoacid generators for resist compns. and patterning process thereof)

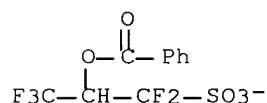
RN 868049-02-9 CAPLUS

CN Sulfonium, triphenyl-, 2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 868048-97-9

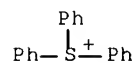
CMF C10 H6 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



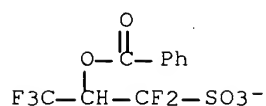
RN 911683-59-5 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with 2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 868048-97-9

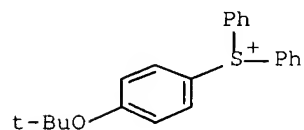
CMF C10 H6 F5 O5 S



CM 2

CRN 157089-25-3

CMF C22 H23 O S



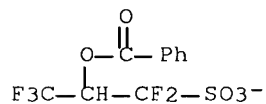
RN 911683-98-2 CAPLUS

CN Sulfonium, (4-hydroxyphenyl)diphenyl-, salt with 2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 868048-97-9

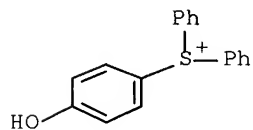
CMF C10 H6 F5 O5 S



CM 2

CRN 108493-51-2

CMF C18 H15 O S



IT 868048-80-0P 868048-84-4P 868048-98-0P
 911683-58-4P, Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-(4-phenylbenzoyloxy)propanesulfonate 911683-60-8P
 911683-61-9P 911683-62-0P 911683-63-1P

911683-67-5P 911683-68-6P 911683-83-5P
 911683-84-6P 911683-86-8P 911683-87-9P
 911683-88-0P 911683-90-4P 911683-91-5P
 911683-93-7P 911683-95-9P 911683-97-1P,
 Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-acetyloxypropane-1-sulfonate
 911683-99-3P, (4-Methacryloyloxyphenyl)diphenylsulfonium
 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)

(production of sulfonate salts and derivs. useful as photoacid generators
 for resist compns. and patterning process thereof)

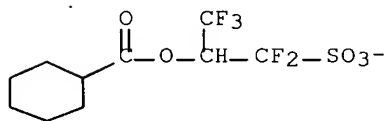
RN 868048-80-0 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-
 trifluoroethyl cyclohexanecarboxylate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 868048-79-7

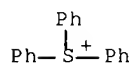
CMF C10 H12 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



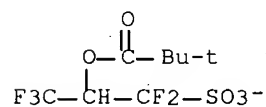
RN 868048-84-4 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-
 trifluoroethyl 2,2-dimethylpropanoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 868048-83-3

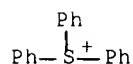
CMF C8 H10 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



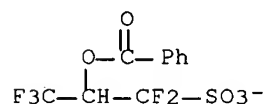
RN 868048-98-0 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 868048-97-9

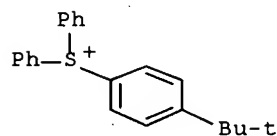
CMF C10 H6 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



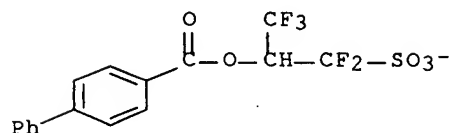
RN 911683-58-4 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-
trifluoroethyl [1,1'-biphenyl]-4-carboxylate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-57-3

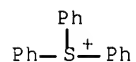
CMF C16 H10 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



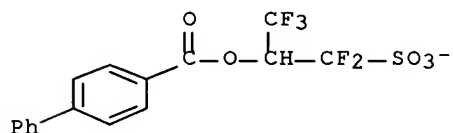
RN 911683-60-8 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
1-(difluorosulfomethyl)-2,2,2-trifluoroethyl [1,1'-biphenyl]-4-carboxylate
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-57-3

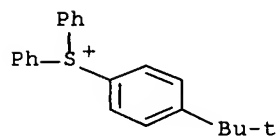
CMF C16 H10 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



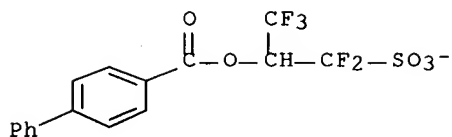
RN 911683-61-9 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
1-(difluorosulfomethyl)-2,2,2-trifluoroethyl [1,1'-biphenyl]-4-carboxylate
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-57-3

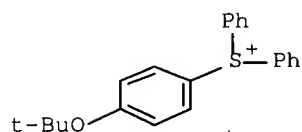
CMF C16 H10 F5 O5 S



CM 2

CRN 157089-25-3

CMF C22 H23 O S



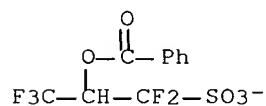
RN 911683-62-0 CAPLUS

CN Sulfonium, tris(4-methylphenyl)-, salt with 2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 868048-97-9

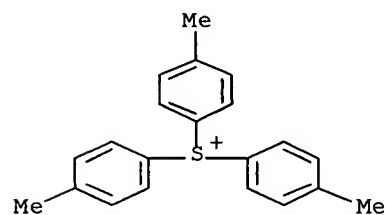
CMF C10 H6 F5 O5 S



CM 2

CRN 47197-43-3

CMF C21 H21 S



RN 911683-63-1 CAPLUS

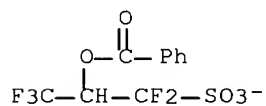
CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, salt with

2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 868048-97-9

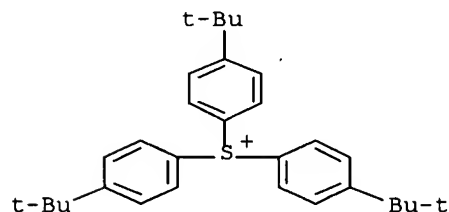
CMF C10 H6 F5 O5 S



CM 2

CRN 91815-56-4

CMF C30 H39 S



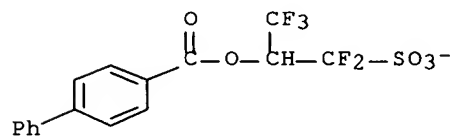
RN 911683-67-5 CAPLUS

CN Sulfonium, tris(4-methylphenyl)-, salt with 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl [1,1'-biphenyl]-4-carboxylate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-57-3

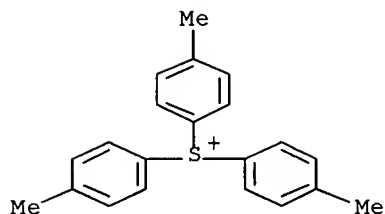
CMF C16 H10 F5 O5 S



CM 2

CRN 47197-43-3

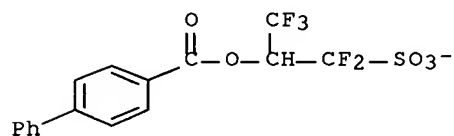
CMF C21 H21 S



RN 911683-68-6 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, salt with
 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl [1,1'-biphenyl]-4-carboxylate
 (1:1) (9CI) (CA INDEX NAME)

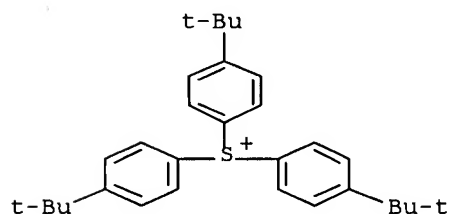
CM 1

CRN 911683-57-3
 CMF C16 H10 F5 O5 S



CM 2

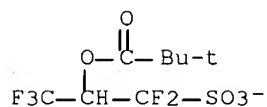
CRN 91815-56-4
 CMF C30 H39 S



RN 911683-83-5 CAPLUS
 CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 2,2-dimethylpropanoate (1:1)
 (9CI) (CA INDEX NAME)

CM 1

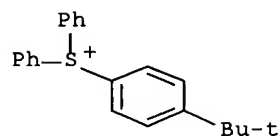
CRN 868048-83-3
 CMF C8 H10 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



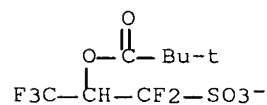
RN 911683-84-6 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, salt with
 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 2,2-dimethylpropanoate (1:1)
 (9CI) (CA INDEX NAME)

CM 1

CRN 868048-83-3

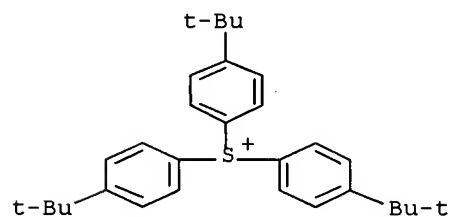
CMF C8 H10 F5 O5 S



CM 2

CRN 91815-56-4

CMF C30 H39 S



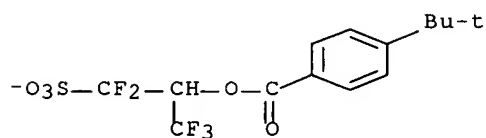
RN 911683-86-8 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 4-(1,1-dimethylethyl)benzoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-85-7

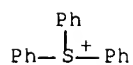
CMF C14 H14 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



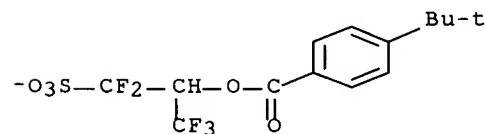
RN 911683-87-9 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 4-(1,1-dimethylethyl)benzoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-85-7

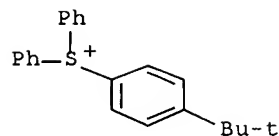
CMF C14 H14 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



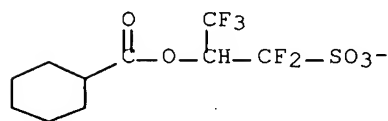
RN 911683-88-0 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
1-(difluorosulfomethyl)-2,2,2-trifluoroethyl cyclohexanecarboxylate (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 868048-79-7

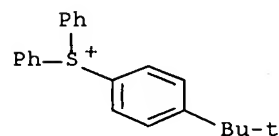
CMF C10 H12 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



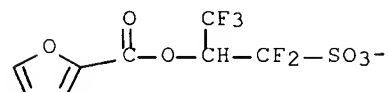
RN 911683-90-4 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 2-furancarboxylate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-89-1

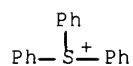
CMF C8 H4 F5 O6 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



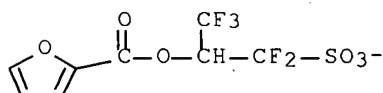
RN 911683-91-5 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
1,1,3,3,3-pentafluoro-2-[(2-furanylcarbonyl)oxy]-1-propanesulfonic acid
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-89-1

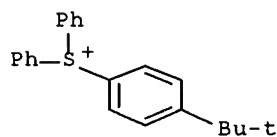
CMF C8 H4 F5 O6 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



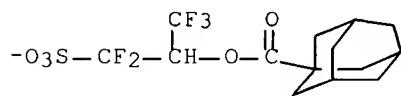
RN 911683-93-7 CAPLUS

CN Sulfonium, triphenyl-, salt with 1-(difluorosulfomethyl)-2,2,2-
trifluoroethyl tricyclo[3.3.1.1^{3,7}]decane-1-carboxylate (1:1) (9CI) (CA
INDEX NAME)

CM 1

CRN 911683-92-6

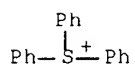
CMF C14 H16 F5 O5 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



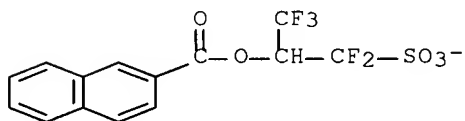
RN 911683-95-9 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, salt with
1-(difluorosulfomethyl)-2,2,2-trifluoroethyl 2-naphthalenecarboxylate
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-94-8

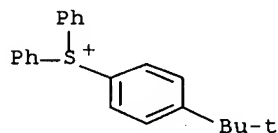
CMF C14 H8 F5 O5 S



CM 2

CRN 66482-54-0

CMF C22 H23 S



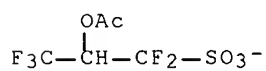
RN 911683-97-1 CAPLUS

CN Sulfonium, triphenyl-, salt with 2-(acetyloxy)-1,1,3,3,3-pentafluoro-1-
propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 911683-96-0

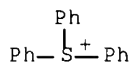
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CM 2

CRN 18393-55-0

CMF C18 H15 S



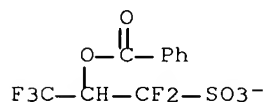
RN 911683-99-3 CAPLUS

CN Sulfonium, [4-[(2-methyl-1-oxo-2-propenyl)oxy]phenyl]diphenyl-, salt with
2-(benzoyloxy)-1,1,3,3,3-pentafluoro-1-propanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 868048-97-9

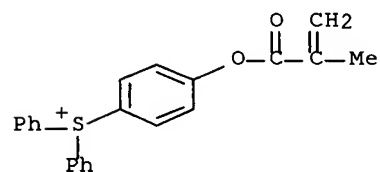
CMF C10 H6 F5 O5 S



CM 2

CRN 212579-96-9

CMF C22 H19 O2 S



IT 945-51-7, Diphenyl sulfoxide 1774-35-2

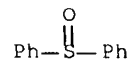
91815-55-3, Bis(4-tert-butylphenyl) sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)

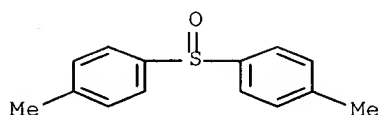
(production of sulfonate salts and derivs. useful as photoacid generators
for resist comps. and patterning process thereof)

RN 945-51-7 CAPLUS

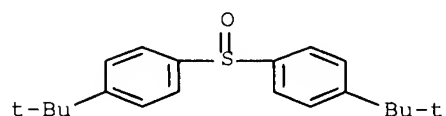
CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)



RN 91815-55-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38
- IT 4270-70-6P 19158-66-8P, Phenacyltetrahydrothiophenium bromide
 22417-22-7P, Tris(4-methylphenyl)sulfonium chloride 61358-24-5P,
 Bis(4-tert-butylphenyl)iodonium hydrogen sulfate 258872-06-9P,
 4-tert-Butylphenyldiphenylsulfonium bromide 326925-53-5P
 469912-73-0P, Tris(4-tert-butylphenyl)sulfonium bromide
 911683-53-9P, Dimethylphenylsulfonium hydrogen sulfate 911683-54-0P,
 Sodium 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate
 911683-55-1P 911683-72-2P, Sodium 1,1,3,3,3-pentafluoro-2-(pivaloyloxy)-
 propanesulfonate 911683-73-3P, Sodium 1,1,3,3,3-pentafluoro-2-
 (cyclohexanecarbonyloxy)propanesulfonate 911683-75-5P, Sodium
 1,1,3,3,3-pentafluoro-2-(2-furoyloxy)-propanesulfonate 911683-77-7P
 911683-79-9P 911683-81-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (production of sulfonate salts and derivs. useful as photoacid generators
 for resist compns. and patterning process thereof)
- IT 868049-02-9P, Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-
 benzoyloxypropane-1-sulfonate 911683-59-5P, 4-tert-
 Butoxyphenyldiphenylsulfonium 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-
 sulfonate 911683-98-2P, (4-Hydroxyphenyl)diphenylsulfonium
 1,1,3,3,3-pentafluoro-2-benzoyloxypropane-1-sulfonate
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or
 engineered material use); PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses)
 (production of sulfonate salts and derivs. useful as photoacid generators
 for resist compns. and patterning process thereof)
- IT 868048-80-0P 868048-84-4P 868048-98-0P
 911683-58-4P, Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-(4-
 phenylbenzoyloxy)propanesulfonate 911683-60-8P
 911683-61-9P 911683-62-0P 911683-63-1P
 911683-64-2P 911683-65-3P 911683-66-4P 911683-67-5P
 911683-68-6P 911683-69-7P 911683-70-0P 911683-71-1P

911683-83-5P 911683-84-6P 911683-86-8P
 911683-87-9P 911683-88-0P 911683-90-4P
 911683-91-5P 911683-93-7P 911683-95-9P
 911683-97-1P, Triphenylsulfonium 1,1,3,3,3-pentafluoro-2-acetyloxypropene-1-sulfonate 911683-99-3P, (4-Methacryloyloxyphenyl)diphenylsulfonium 1,1,3,3,3-pentafluoro-2-benzoyloxypropene-1-sulfonate

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(production of sulfonate salts and derivs. useful as photoacid generators for resist compns. and patterning process thereof)

IT 70-11-1 77-78-1, Dimethyl sulfate 98-06-6 100-68-5, Thioanisole 106-43-4 108-24-7, Acetic anhydride 108-90-7, reactions 110-01-0, Tetrahydrothiophene 920-46-7, Methacryloyl chloride 945-51-7, Diphenyl sulfoxide 1774-35-2 3972-56-3 3972-65-4 7631-90-5, Sodium hydrogen sulfite 7664-93-9, Sulfuric acid, reactions 7758-05-6 53841-60-4, 1,1,3,3,3-Pentafluoropropen-2-yl benzoate 91815-55-3, Bis(4-tert-butylphenyl) sulfoxide 885275-40-1, 1,1,3,3,3-Pentafluoropropen-2-yl pivaloate 911683-56-2, 1,1,3,3,3-Pentafluoropropen-2-yl 4-phenyl benzoate 911683-74-4, 1,1,3,3,3-Pentafluoropropen-2-yl cyclohexanecarboxylate 911683-76-6, 1,1,3,3,3-Pentafluoropropen-2-yl furanyl-2-carboxylate 911683-78-8 911683-80-2 911683-82-4, 1,1,3,3,3-Pentafluoropropen-2-yl adamantane-1-carboxylate

RL: RCT (Reactant); RACT (Reactant or reagent)

(production of sulfonate salts and derivs. useful as photoacid generators for resist compns. and patterning process thereof)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:371213 CAPLUS Full-text

DOCUMENT NUMBER: 142:411837

TITLE: Process for producing triarylsulfonium salt for resist acid generator and cationic polymerization catalysts

INVENTOR(S): Sumino, Motoshige; Fukasawa, Kazuhito; Imazeki, Shigeaki; Watanabe, Tetsuya

PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037778	A1	20050428	WO 2004-JP14604	20041004
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

EP 1676835 A1 20060705 EP 2004-792015 20041004
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
 CN 1871212 A 20061129 CN 2004-80030948 20041004
 US 2007083060 A1 20070412 US 2006-576299 20060419 <--
 PRIORITY APPLN. INFO.: JP 2003-360774 A 20031021
 WO 2004-JP14604 W 20041004

OTHER SOURCE(S): MARPAT 142:411837

ED Entered STN: 29 Apr 2005

AB A triarylsulfonium salt in which only one aromatic ring differs from the others can be efficiently produced. The process, which is for producing a triarylsulfonium salt $R(C_6H_4R_1)_2S^+ A^-$ (wherein R represents aryl optionally having a substituent different from R_1 ; and A^- represents a strong-acid residue), is characterized by reacting a diaryl sulfoxide $(C_6H_4R_1)_2SO$ with an aryl-Grignard reagent $RMgX$ (wherein X represents halogen) in the presence of an activator having a high affinity for oxygen, the activator being used in an amount of 3 to 7.5 equiv to the diaryl sulfoxide, and then reacting the reaction product with either a strong acid represented by the general formula HA or a salt of the acid.

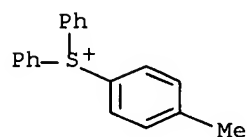
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 753025-73-9P 753025-75-1P 753025-77-3P
 753025-78-4P 753025-80-8P 753025-81-9P
 850345-82-3P 850345-83-4P 850345-84-5P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)

(process for producing triarylsulfonium salt for resist acid generator and cationic polymerization catalysts)

RN 4189-82-6 CAPLUS

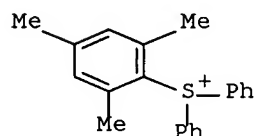
CN Sulfonium, (4-methylphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 347841-68-3 CAPLUS

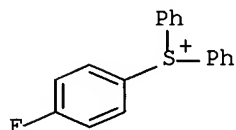
CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻

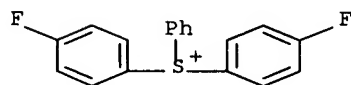
RN 475598-78-8 CAPLUS

CN Sulfonium, (4-fluorophenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



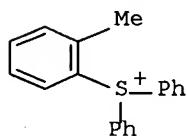
RN 475598-82-4 CAPLUS

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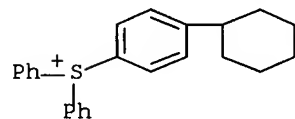
RN 753025-61-5 CAPLUS

CN Sulfonium, (2-methylphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



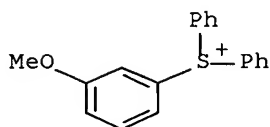
RN 753025-62-6 CAPLUS

CN Sulfonium, (4-cyclohexylphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



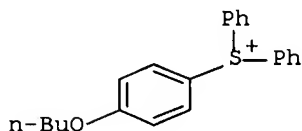
RN 753025-66-0 CAPLUS

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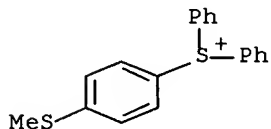
RN 753025-68-2 CAPLUS

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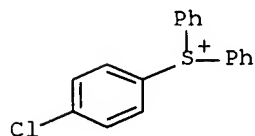
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CN Sulfonium, [4-(methylthio)phenyl]diphenyl-, bromide (9CI) (CA INDEX NAME)



RN 753025-73-9 CAPLUS

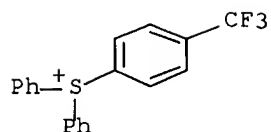
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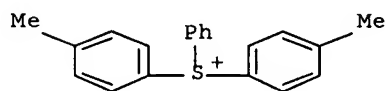
CN Sulfonium, diphenyl[4-(trifluoromethyl)phenyl]-, bromide (9CI) (CA INDEX

NAME)



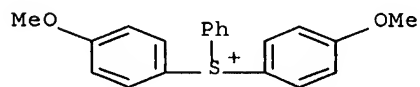
RN 753025-77-3 CAPLUS

CN Sulfonium, bis(4-methylphenyl)phenyl-, bromide (9CI) (CA INDEX NAME)



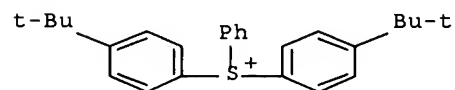
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CN Sulfonium, bis(4-methoxyphenyl)phenyl-, bromide (9CI) (CA INDEX NAME)



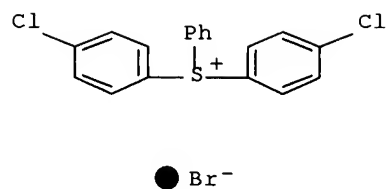
RN 753025-80-8 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethyl)phenyl]phenyl-, bromide (9CI) (CA INDEX NAME)



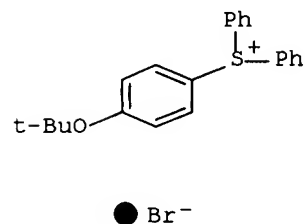
RN 753025-81-9 CAPLUS

CN Sulfonium, bis(4-chlorophenyl)phenyl-, bromide (9CI) (CA INDEX NAME)



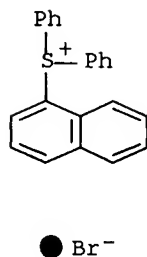
RN 850345-82-3 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, bromide (1:1) (CA INDEX NAME)



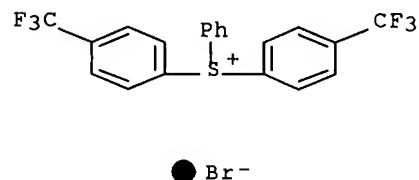
RN 850345-83-4 CAPLUS

CN Sulfonium, 1-naphthalenyldiphenyl-, bromide (9CI) (CA INDEX NAME)



RN 850345-84-5 CAPLUS

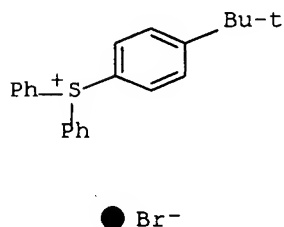
CN Sulfonium, phenylbis[4-(trifluoromethyl)phenyl]-, bromide (9CI) (CA INDEX NAME)



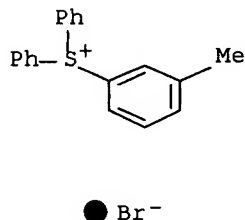
IT 258872-06-9P 347841-66-1P 753025-64-8P

RL: CAT (Catalyst use); IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(process for producing triarylsulfonium salt for resist acid generator and cationic polymerization catalysts)

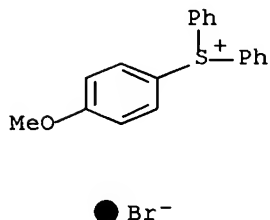
RN 258872-06-9 CAPLUS
 CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, bromide (1:1) (CA INDEX NAME)



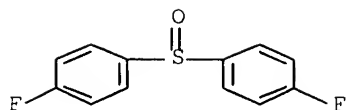
RN 347841-66-1 CAPLUS
 CN Sulfonium, (3-methylphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



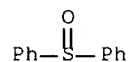
RN 753025-64-8 CAPLUS
 CN Sulfonium, (4-methoxyphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



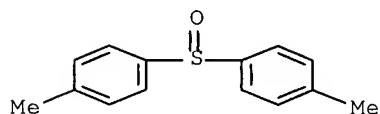
IT 395-25-5, Bis(4-fluorophenyl)sulfoxide 945-51-7,
 Diphenyl sulfoxide 1774-35-2 1774-36-3
 3085-42-5, Bis(4-chlorophenyl)sulfoxide 91815-55-3
 143028-36-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process for producing triarylsulfonium salt for resist acid generator
 and cationic polymerization catalysts)
 RN 395-25-5 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)



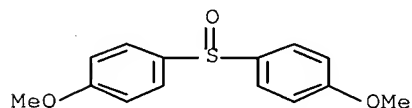
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 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



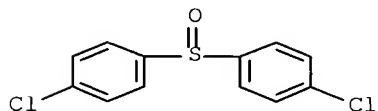
RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)



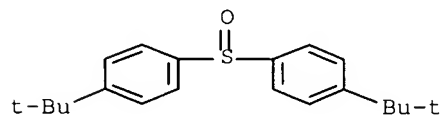
RN 1774-36-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methoxy- (CA INDEX NAME)



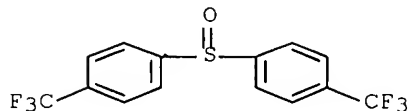
RN 3085-42-5 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-chloro- (9CI) (CA INDEX NAME)



RN 91815-55-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



RN 143028-36-8 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



IC ICM C07C381-12
 CC 35-3 (Chemistry of Synthetic High Polymers)
 IT 4189-82-6P 347841-68-3P 475598-78-8P
 475598-82-4P 753025-61-5P 753025-62-6P
 753025-66-0P 753025-68-2P 753025-71-7P
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 850345-82-3P 850345-83-4P 850345-84-5P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (process for producing triarylsulfonium salt for resist acid generator
 and cationic polymerization catalysts)
 IT 258872-06-9P 347841-66-1P 753025-64-8P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); RCT (Reactant); PREP
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 106-38-7, 4-Bromotoluene 106-39-8, 1-Bromo-4-chlorobenzene 108-86-1,
 Bromobenzene, reactions 395-25-5, Bis(4-fluorophenyl)sulfoxide
 402-43-7, 1-Bromo-4-trifluoromethylbenzene 460-00-4,
 1-Bromo-4-fluorobenzene 576-83-0, 1-Bromo-2,4,6-trimethylbenzene
 591-17-3, 3-Bromotoluene 945-51-7, Diphenyl sulfoxide
 1774-35-2 1774-36-3 2398-37-0, 1-Bromo-3-
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 3972-65-4, 1-Bromo-4-tert-butylbenzene 25109-28-8, 1-Bromo-4-
 cyclohexylbenzene 39969-57-8, 1-Bromo-4-butoxybenzene 60876-70-2,
 1-Bromo-4-tert-butoxybenzene 91815-55-3 143028-36-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process for producing triarylsulfonium salt for resist acid generator
 and cationic polymerization catalysts)
 REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:888702 CAPLUS Full-text
 DOCUMENT NUMBER: 137:392177
 TITLE: Fluorinated triphenylsulfonium salts for acid
 generators for resists or cationic photopolymn.
 initiators
 INVENTOR(S): Ishihara, Masami; Sumino, Motoshige;
 Fukasawa, Kazuhito; Maesawa, Tsuneaki;
 Imazeki, Shigeaki; Sakuma, Yumi
 PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
 SOURCE: PCT Int. Appl., 78 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092559	A1	20021121	WO 2002-JP4456	20020508
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002309033	A1	20021125	AU 2002-309033	20020508
PRIORITY APPLN. INFO.:			JP 2001-141048	A 20010511
			JP 2001-141049	A 20010511
			WO 2002-JP4456	W 20020508

OTHER SOURCE(S): MARPAT 137:392177

ED Entered STN: 22 Nov 2002

AB The title compds. have structures R1R22S+A1 and R33S+A2, where R1 is a monofluorophenyl optionally containing a substituent other than F, R2 is independently Ph optionally containing a substituent other than F, A1 is an anion resulting from a sulfonic or carboxylic acid having a F atom, R3 is independently fluorinated Ph optionally containing a substituent other than F, and A2 is an anion resulting from a sulfonic acid. Thus, 4-fluorophenyldiphenylsulfonium nonafluorobutanesulfonate was prepared and mixed in a resist composition containing tert-Bu acrylate-p-hydroxystyrene-styrene copolymer.

IT 330812-90-3P 330812-91-4P 475598-74-4P
 475598-75-5P 475598-76-6P 475598-77-7P
 475598-80-2P 475598-81-3P 475598-83-5P
 475598-84-6P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)

(fluorinated triphenylsulfonium salts for acid generators for resists
 and cationic photopolymn. initiators)

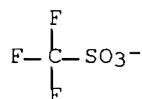
RN 330812-90-3 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

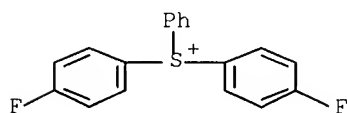
CRN 37181-39-8

CMF C F3 O3 S



CM 2

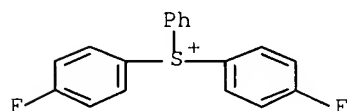
CRN 29248-00-8
CMF C18 H13 F2 S



RN 330812-91-4 CAPLUS
CN Sulfonium, bis(4-fluorophenyl)phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

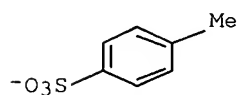
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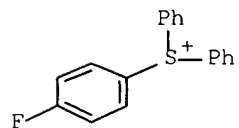
CRN 16722-51-3
CMF C7 H7 O3 S



RN 475598-74-4 CAPLUS
CN Sulfonium, (4-fluorophenyl)diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

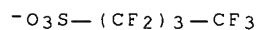
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



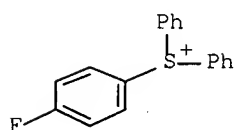
RN 475598-75-5 CAPLUS

CN Sulfonium, (4-fluorophenyl)diphenyl-, salt with
1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-1-octanesulfonic acid
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 70084-25-2

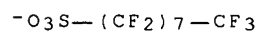
CMF C18 H14 F S



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S



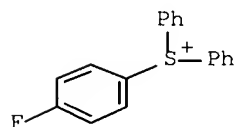
RN 475598-76-6 CAPLUS

CN Sulfonium, (4-fluorophenyl)diphenyl-, salt with pentafluorobenzenesulfonic
acid (1:1) (9CI) (CA INDEX NAME)

CM 1

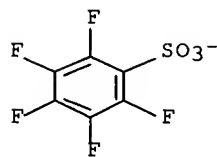
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CMF C18 H14 F S



CM 2

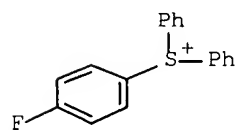
CRN 46377-88-2
CMF C6 F5 O3 S



RN 475598-77-7 CAPLUS
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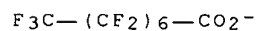
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CRN 70084-25-2
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CM 2

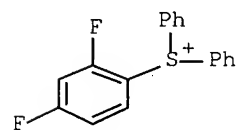
CRN 45285-51-6
CMF C8 F15 O2



RN 475598-80-2 CAPLUS
CN Sulfonium, (2,4-difluorophenyl)diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

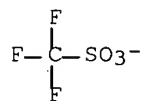
CRN 475598-79-9
CMF C18 H13 F2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



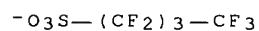
RN 475598-81-3 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)phenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 45187-15-3

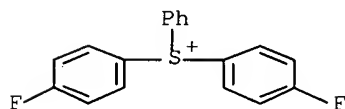
CMF C4 F9 O3 S



CM 2

CRN 29248-00-8

CMF C18 H13 F2 S



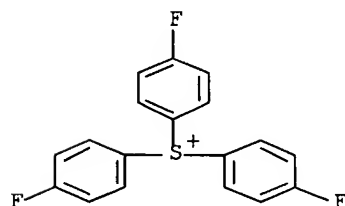
RN 475598-83-5 CAPLUS

CN Sulfonium, tris(4-fluorophenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47197-44-4

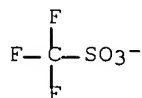
CMF C18 H12 F3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



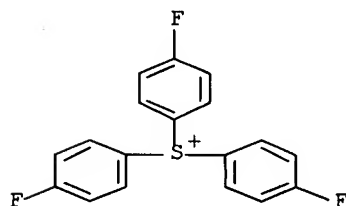
RN 475598-84-6 CAPLUS

CN Sulfonium, tris(4-fluorophenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47197-44-4

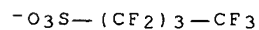
CMF C18 H12 F3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



IT 395-25-5P 54007-94-2P 475598-78-8P

475598-82-4P

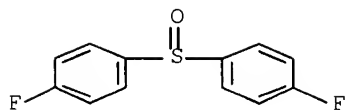
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)

(fluorinated triphenylsulfonium salts for acid generators for resists and cationic photopolymer. initiators)

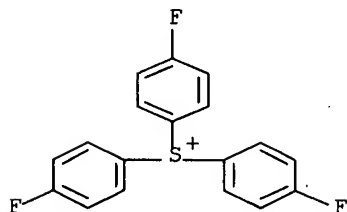
RN 395-25-5 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)]



RN 54007-94-2 CAPLUS

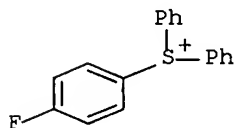
CN Sulfonium, tris(4-fluorophenyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 475598-78-8 CAPLUS

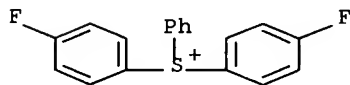
CN Sulfonium, (4-fluorophenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 475598-82-4 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)phenyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

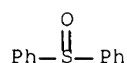
IT 945-51-7, Diphenyl sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)

(fluorinated triphenylsulfonium salts for acid generators for resists and cationic photopolymer. initiators)

RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



IC ICM C07C381-12
ICS C08F002-48; C08K005-06; C08K005-1545; C08K005-3492; C08K005-36;
C08L025-18; C09K003-00; G03F007-004; G03F007-029; H01L021-027

CC 76-5 (Electric Phenomena)
Section cross-reference(s): 25, 35

IT 330812-90-3P 330812-91-4P 475598-74-4P
475598-75-5P 475598-76-6P 475598-77-7P
475598-80-2P 475598-81-3P 475598-83-5P
475598-84-6P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
USES (Uses)
(fluorinated triphenylsulfonium salts for acid generators for resists
and cationic photopolymerization initiators)

IT 395-25-5P 460-00-4DP, 4-Bromofluorobenzene, Grignard reagents
54007-94-2P 270564-02-8P, Tetramethylammonium
pentafluorobenzenesulfonate 475598-78-8P 475598-82-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)
(fluorinated triphenylsulfonium salts for acid generators for resists
and cationic photopolymerization initiators)

IT 75-59-2, Tetramethylammonium hydroxide 104-15-4, p-Toluenesulfonic acid,
reactions 108-86-1D, Bromobenzene, Grignard reagents 335-67-1,
Perfluorooctanoic acid 358-23-6, Trifluoromethanesulfonic acid anhydride
375-73-5, Nonafluorobutanesulfonic acid 462-06-6, Fluorobenzene
832-53-1, Pentafluorobenzenesulfonyl chloride 945-51-7, Diphenyl
sulfoxide 1493-13-6, Trifluoromethanesulfonic acid 1763-23-1,
Perfluorooctanesulfonic acid 7719-09-7, Thionyl chloride 27858-05-5,
Difluorobenzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorinated triphenylsulfonium salts for acid generators for resists
and cationic photopolymerization initiators)

L50 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:171850 CAPLUS Full-text

DOCUMENT NUMBER: 136:217191

TITLE: Sulfonium salt compounds, their manufacture and use as
acid generators or cationic photopolymerization
initiators

INVENTOR(S): Ishihara, Masami; Sumino, Motoshige;
Fukasawa, Kazuhito; Katano, Naoki;
Imazeki, Shigeaki

PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan

SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018332	A1	20020307	WO 2001-JP5512	20010627
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,			

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
 UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001067839 A5 20020313 AU 2001-67839 20010627

EP 1314725 A1 20030528 EP 2001-945637 20010627

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2004033434 A1 20040219 US 2003-312572 20030114

US 6924323 B2 20050802

PRIORITY APPLN. INFO.:

JP 2000-260157 A 20000830

WO 2001-JP5512 W 20010627

OTHER SOURCE(S): MARPAT 136:217191

ED Entered STN: 08 Mar 2002

AB The compds. are of (R1R2R3S+)nYn- type (R1, R2, R3 = aryl groups; Yn- = anion derived from a fluorinated C≥3 carboxylic acids; n = 1 or 2, provided that R1, R2, and R3 each is not a Ph group having a substituent in an ortho and/or a meta position) which are used as acid generators for resist compns. containing a diazodisulfone compound as co-agent. Resists containing the above can produce profiles of ultrafine patterns and diminish side wall irregularities in ultrafine patterns. The compds. are also useful as cationic photopolymer. initiators. Thus, adding (CF3CO)2O 42.0 to Ph2SO 21.1 dissolved in benzene (200 mL) at 0-5°, mixing for 30 min, adding CF3SO3H 15.0 g and mixing at 0-20° for 3 h gave Ph3S+·CF3SO- which was then converted into a salt by reacting with heptafluorobutyric acid.

IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; sulfonium salt compds., manufacture and use as acid generators or cationic photopolymer. initiators)

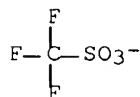
RN 66003-78-9 CAPLUS

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 37181-39-8

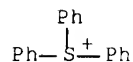
CMF C F3 O3 S



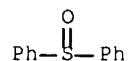
CM 2

CRN 18393-55-0

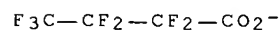
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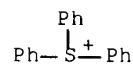
IT 945-51-7, Diphenyl sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; sulfonium salt compds., manufacture and use as acid generators
 or
 cationic photopolymer. initiators)
 RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



IT 365971-69-3P 365971-72-8P 365971-84-2P
 402828-10-8P 402828-11-9P 402828-13-1P
 402828-14-2P 402828-15-3P 402828-16-4P
 402828-17-5P 402828-18-6P 402828-20-0P
 402828-21-1P 402828-22-2P 402828-23-3P
 402828-24-4P 402828-27-7P 402828-28-8P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymer. initiators)
 RN 365971-69-3 CAPLUS
 CN Sulfonium, triphenyl-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA
 INDEX NAME)
 CM 1
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 CMF C4 F7 O2



CM 2
 CRN 18393-55-0
 CMF C18 H15 S

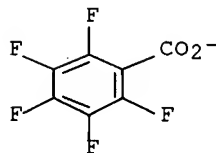


RN 365971-72-8 CAPLUS
 CN Sulfonium, triphenyl-, 2,3,4,5,6-pentafluorobenzoate (1:1) (CA INDEX
 NAME)

CM 1

CRN 59561-61-4

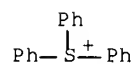
CMF C7 F5 02



CM 2

CRN 18393-55-0

CMF C18 H15 S



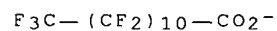
RN 365971-84-2 CAPLUS

CN Sulfonium, triphenyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-tricosafuorododecanoate (1:1) (CA INDEX NAME)

CM 1

CRN 171978-95-3

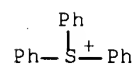
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CM 2

CRN 18393-55-0

CMF C18 H15 S



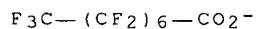
RN 402828-10-8 CAPLUS

CN Sulfonium, triphenyl-, salt with pentadecafluorooctanoic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 45285-51-6

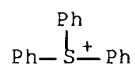
CMF C8 F15 O2



CM 2

CRN 18393-55-0

CMF C18 H15 S



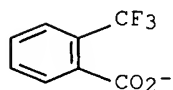
RN 402828-11-9 CAPLUS

CN Sulfonium, triphenyl-, salt with 2-(trifluoromethyl)benzoic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 124673-81-0

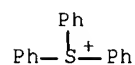
CMF C8 H4 F3 O2



CM 2

CRN 18393-55-0

CMF C18 H15 S



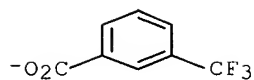
RN 402828-13-1 CAPLUS

CN Sulfonium, triphenyl-, salt with 3-(trifluoromethyl)benzoic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 75899-44-4

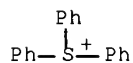
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CM 2

CRN 18393-55-0

CMF C18 H15 S



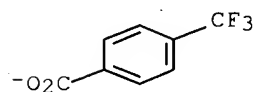
RN 402828-14-2 CAPLUS

CN Sulfonium, triphenyl-, salt with 4-(trifluoromethyl)benzoic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 74056-34-1

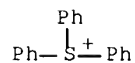
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CM 2

CRN 18393-55-0

CMF C18 H15 S



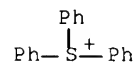
RN 402828-15-3 CAPLUS

CN Sulfonium, triphenyl-, salt with 2-fluorobenzoic acid (1:1) (9CI) (CA
INDEX NAME)

CM 1

CRN 18393-55-0

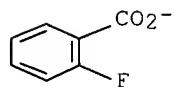
CMF C18 H15 S



CM 2

CRN 16426-56-5

CMF C7 H4 F O2



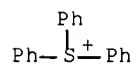
RN 402828-16-4 CAPLUS

CN Sulfonium, triphenyl-, salt with 3-fluorobenzoic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 18393-55-0

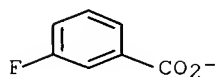
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CM 2

CRN 2365-28-8

CMF C7 H4 F O2



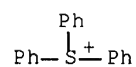
RN 402828-17-5 CAPLUS

CN Sulfonium, triphenyl-, salt with 4-fluorobenzoic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 18393-55-0

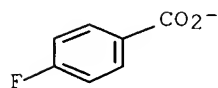
CMF C18 H15 S



CM 2

CRN 2365-27-7

CMF C7 H4 F O2



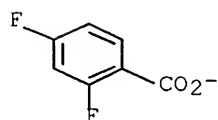
RN 402828-18-6 CAPLUS

CN Sulfonium, triphenyl-, salt with 2,4-difluorobenzoic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 83198-07-6

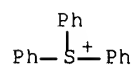
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CM 2

CRN 18393-55-0

CMF C18 H15 S



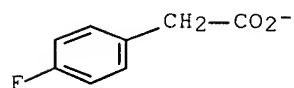
RN 402828-20-0 CAPLUS

CN Sulfonium, triphenyl-, salt with 4-fluorobenzeneacetic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

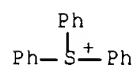
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CMF C8 H6 F O2



CM 2

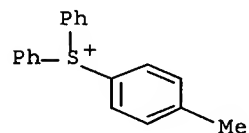
CRN 18393-55-0
CMF C18 H15 S



RN 402828-21-1 CAPLUS
CN Sulfonium, (4-methylphenyl)diphenyl-, salt with pentadecafluorooctanoic acid (1:1) (9CI) (CA INDEX NAME)

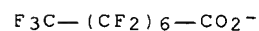
CM 1

CRN 47045-31-8
CMF C19 H17 S



CM 2

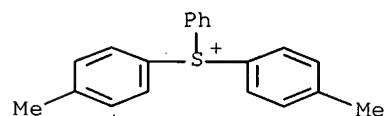
CRN 45285-51-6
CMF C8 F15 O2



RN 402828-22-2 CAPLUS
CN Sulfonium, bis(4-methylphenyl)phenyl-, salt with pentadecafluorooctanoic acid (1:1) (9CI) (CA INDEX NAME)

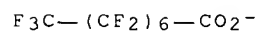
CM 1

CRN 70082-58-5
CMF C20 H19 S



CM 2

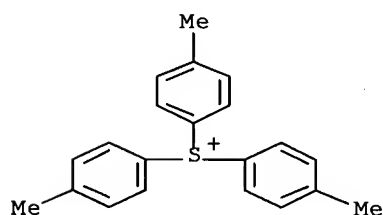
CRN 45285-51-6
CMF C8 F15 O2



RN 402828-23-3 CAPLUS
CN Sulfonium, tris(4-methylphenyl)-, salt with pentadecafluorooctanoic acid (1:1) (9CI) (CA INDEX NAME)

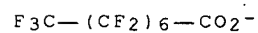
CM 1

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CMF C21 H21 S



CM 2

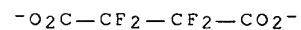
CRN 45285-51-6
CMF C8 F15 O2



RN 402828-24-4 CAPLUS
CN Sulfonium, triphenyl-, salt with tetrafluorobutanedioic acid (2:1) (9CI) (CA INDEX NAME)

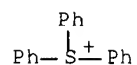
CM 1

CRN 334478-24-9
CMF C4 F4 O4



CM 2

CRN 18393-55-0
CMF C18 H15 S

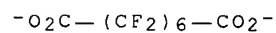


RN 402828-27-7 CAPLUS
 CN Sulfonium, triphenyl-, salt with dodecafluorooctanedioic acid (2:1) (9CI)
 (CA INDEX NAME)

CM 1

CRN 402828-26-6

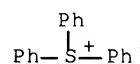
CMF C8 F12 O4



CM 2

CRN 18393-55-0

CMF C18 H15 S

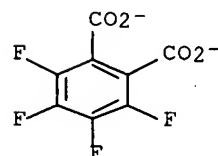


RN 402828-28-8 CAPLUS
 CN Sulfonium, triphenyl-, salt with 3,4,5,6-tetrafluoro-1,2-benzenedicarboxylic acid (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 367278-95-3

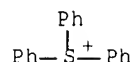
CMF C8 F4 O4



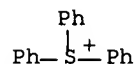
CM 2

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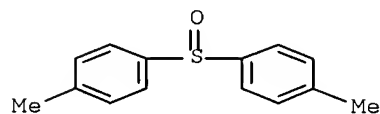
CMF C18 H15 S



IT 3353-89-7P, Triphenylsulfonium bromide
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymn. initiators)
 RN 3353-89-7 CAPLUS
 CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



IT 1774-35-2, Di(p-tolyl)sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymn. initiators)
 RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)



IC ICM C07C321-30
 ICS C07C067-30; C07C053-15; C08L025-18; C08K005-36; C08K005-41;
 G03F007-004; G03F007-029; G03F007-039; G03F007-038
 CC 35-3 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 38, 74, 76
 IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; sulfonium salt compds., manufacture and use as acid
 generators or cationic photopolymn. initiators)
 IT 71-43-2, Benzene, reactions 454-92-2, m-Trifluoromethylbenzoic acid
 456-22-4, p-Fluorobenzoic acid 652-02-8 945-51-7, Diphenyl
 sulfoxide 2794-35-6 3794-61-4 7184-37-4 72776-34-2 402828-12-0
 402828-25-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; sulfonium salt compds., manufacture and use as acid generators
 or
 cationic photopolymn. initiators)
 IT 365971-69-3P 365971-72-8P 365971-84-2P
 402828-10-8P 402828-11-9P 402828-13-1P
 402828-14-2P 402828-15-3P 402828-16-4P
 402828-17-5P 402828-18-6P 402828-20-0P

402828-21-1P 402828-22-2P 402828-23-3P

402828-24-4P 402828-27-7P 402828-28-8P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)

(sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymer. initiators)

IT 3353-89-7P, Triphenylsulfonium bromide

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)

(sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymer. initiators)

IT 106-38-7, p-Bromotoluene 307-66-4 335-93-3 1493-13-6,
 Trifluoromethanesulfonic acid 1774-35-2, Di(p-tolyl)sulfoxide
 2966-42-9 3796-31-4 10035-10-6, Hydrobromic acid, reactions
 402828-19-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(sulfonium salt compds., manufacture and use as acid generators or cationic
 photopolymer. initiators)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:488631 CAPLUS Full-text

DOCUMENT NUMBER: 135:76685

TITLE: Preparation of triarylsulfonium salts as photoresist
 acid generators

INVENTOR(S): Oono, Keiji; Fukasawa, Kazuhito; Sakamoto,
 Kazunori; Urano, Fumiyoshi; Sumino, Motoshige
 ; Imazeki, Shigeaki

PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan

SOURCE: Eur. Pat. Appl., 42 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1113005	A1	20010704	EP 2000-127570	20001215
EP 1113005	B1	20030806		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002193925	A	20020710	JP 2000-369910	20001205
US 6723483	B1	20040420	US 2000-730744	20001207
TW 525038	B	20030321	TW 2000-89126162	20001208
EP 1238969	A2	20020911	EP 2002-11806	20001215
EP 1238969	A3	20030115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
SG 109439	A1	20050330	SG 2000-7675	20001223
CN 1302799	A	20010711	CN 2000-120687	20001227
PRIORITY APPLN. INFO.:				
			JP 1999-370655	A 19991227
			JP 2000-105789	A 20000407
			JP 2000-315061	A 20001016
			EP 2000-127570	A3 20001215

OTHER SOURCE(S): MARPAT 135:76685

ED Entered STN: 06 Jul 2001

AB Title compds., e.g., Rj(R1)iS+Y- [R = PH; R1 = (un)substituted Ph; Y = R4SO3;
 R4 = alkyl or aryl; i = 0-3; j = 0-2; i+j = 3] were prepared Thus, Ph2SO was

condensed with 2-MeC₆H₄MgBr in the presence of CF₃SO₃SiMe₃ to give 2-MeC₆H₄S+Ph₂Y⁻ (I; Y = SO₃CF₃) which was converted to I (Y = SO₃C₆H₄Me-4).

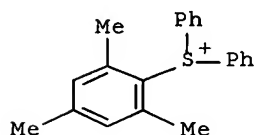
Data for utility of title compds. were given.

IT 258341-99-0P 347841-47-8P 347841-50-3P
 347841-51-4P 347841-52-5P 347841-53-6P
 347841-54-7P 347841-55-8P 347841-56-9P
 347841-57-0P 347841-59-2P 347841-60-5P
 347841-61-6P
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation of triarylsulfonium salts as photoresist acid generators)
 RN 258341-99-0 CAPLUS
 CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, salt with
 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47191-44-6

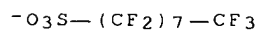
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CM 2

CRN 45298-90-6

CMF C8 F17 O3 S

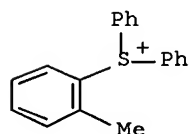


RN 347841-47-8 CAPLUS
 CN Sulfonium, (2-methylphenyl)diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47040-67-5

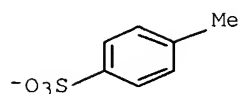
CMF C19 H17 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



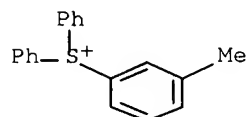
RN 347841-50-3 CAPLUS

CN Sulfonium, (3-methylphenyl)diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 347841-49-0

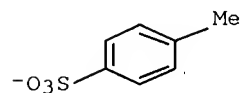
CMF C19 H17 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



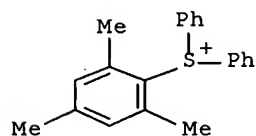
RN 347841-51-4 CAPLUS

CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47191-44-6

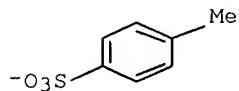
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CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



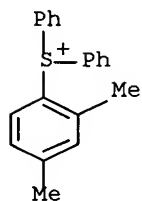
RN 347841-52-5 CAPLUS

CN Sulfonium, (2,4-dimethylphenyl)diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47124-68-5

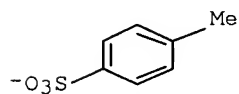
CMF C20 H19 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



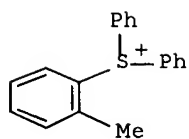
RN 347841-53-6 CAPLUS

CN Sulfonium, (2-methylphenyl)diphenyl-, benzenesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 47040-67-5

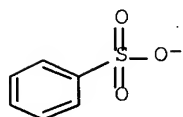
CMF C19 H17 S



CM 2

CRN 3198-32-1

CMF C6 H5 O3 S



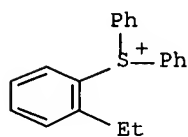
RN 347841-54-7 CAPLUS

CN Sulfonium, (2-ethylphenyl)diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 153852-90-5

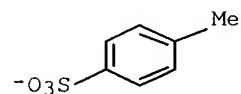
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CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

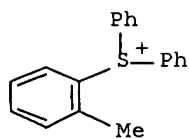


RN 347841-55-8 CAPLUS

CN Sulfonium, (2-methylphenyl)diphenyl-, 1-naphthalenesulfonate (9CI) (CA INDEX NAME)

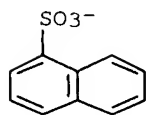
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CMF C19 H17 S



CM 2

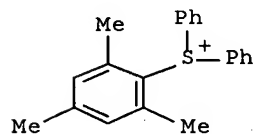
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RN 347841-56-9 CAPLUS
CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, 1-naphthalenesulfonate (9CI)
(CA INDEX NAME)

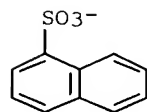
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CRN 47191-44-6
CMF C21 H21 S



CM 2

CRN 22873-93-4
CMF C10 H7 O3 S



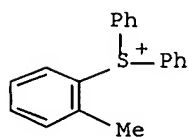
RN 347841-57-0 CAPLUS

CN Sulfonium, (2-methylphenyl)diphenyl-, salt with 4-ethylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47040-67-5

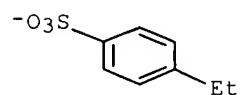
CMF C19 H17 S



CM 2

CRN 18777-64-5

CMF C8 H9 O3 S



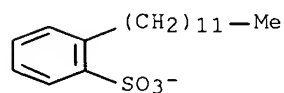
RN 347841-59-2 CAPLUS

CN Sulfonium, (2-methylphenyl)diphenyl-, salt with 2-dodecylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 347841-58-1

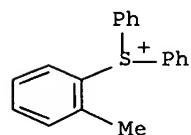
CMF C18 H29 O3 S



CM 2

CRN 47040-67-5

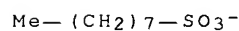
CMF C19 H17 S



RN 347841-60-5 CAPLUS
 CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, 1-octanesulfonate (9CI) (CA INDEX NAME)

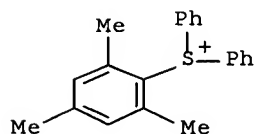
CM 1

CRN 60283-46-7
 CMF C8 H17 O3 S



CM 2

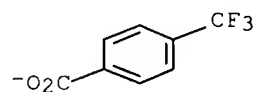
CRN 47191-44-6
 CMF C21 H21 S



RN 347841-61-6 CAPLUS
 CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, salt with 4-(trifluoromethyl)benzoic acid (1:1) (9CI) (CA INDEX NAME)

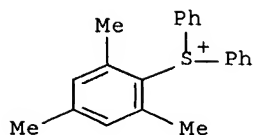
CM 1

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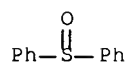


CM 2

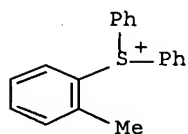
CRN 47191-44-6
 CMF C21 H21 S



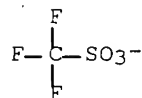
IT 945-51-7, Diphenyl sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of triarylsulfonium salts as photoresist acid generators)
 RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



IT 153852-83-6P 260061-58-3P 347841-66-1P
 347841-68-3P 347841-69-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of triarylsulfonium salts as photoresist acid generators)
 RN 153852-83-6 CAPLUS
 CN Sulfonium, (2-methylphenyl)diphenyl-, salt with trifluoromethanesulfonic
 acid (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 47040-67-5
 CMF C19 H17 S



CM 2
 CRN 37181-39-8
 CMF C F3 O3 S



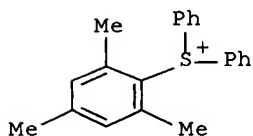
RN 260061-58-3 CAPLUS
 CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, salt with

trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47191-44-6

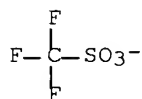
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CM 2

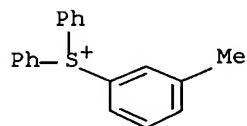
CRN 37181-39-8

CMF C F3 O3 S



RN 347841-66-1 CAPLUS

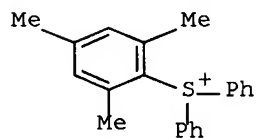
CN Sulfonium, (3-methylphenyl)diphenyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

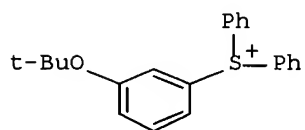
RN 347841-68-3 CAPLUS

CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 347841-69-4 CAPLUS
 CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, chloride (9CI) (CA INDEX NAME)



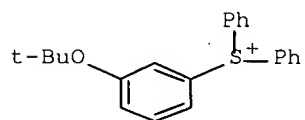
● Cl⁻

IT 186889-35-0P 347841-64-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of triarylsulfonium salts as photoresist acid generators)

RN 186889-35-0 CAPLUS
 CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

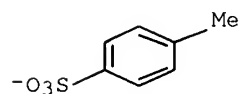
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CRN 186889-23-6
 CMF C22 H23 O S



CM 2

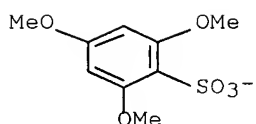
CRN 16722-51-3
 CMF C7 H7 O3 S



RN 347841-64-9 CAPLUS
 CN Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, salt with
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CM 1

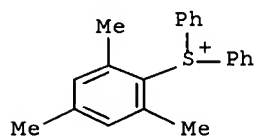
CRN 347841-63-8
 CMF C9 H11 O6 S



CM 2

CRN 47191-44-6

CMF C21 H21 S



IC ICM C07C381-12
ICS G03F007-004

CC 25-9 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 35, 74

IT 258341-99-0P 347841-47-8P 347841-50-3P
347841-51-4P 347841-52-5P 347841-53-6P
347841-54-7P 347841-55-8P 347841-56-9P
347841-57-0P 347841-59-2P 347841-60-5P
347841-61-6P
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of triarylsulfonium salts as photoresist acid generators)

IT 95-46-5, o-Bromotoluene 108-38-3, reactions 108-67-8, Mesitylene, reactions 591-17-3 591-20-8 621-23-8, 1,3,5-Trimethoxybenzene 945-51-7, Diphenyl sulfoxide 1973-22-4, o-Bromoethylbenzene 3794-61-4 3824-94-0 99376-83-7 143715-95-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triarylsulfonium salts as photoresist acid generators)

IT 52499-93-1P 153852-83-6P 260061-58-3P
347841-66-1P 347841-68-3P 347841-69-4P
347841-70-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of triarylsulfonium salts as photoresist acid generators)

IT 186889-35-0P 347841-64-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of triarylsulfonium salts as photoresist acid generators)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

REACTION SEARCH

=> fil reg; d stat que 112; d que nos 113; fil cap1; d que nos 122; d que nos 132;
 d que nos 135; d que nos 138; s 122,132,135,138 not 130
 FILE 'REGISTRY' ENTERED AT 11:26:34 ON 10 JUL 2007
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STRUCTURE FILE UPDATES: 9 JUL 2007 HIGHEST RN 941818-42-4
 DICTIONARY FILE UPDATES: 9 JUL 2007 HIGHEST RN 941818-42-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

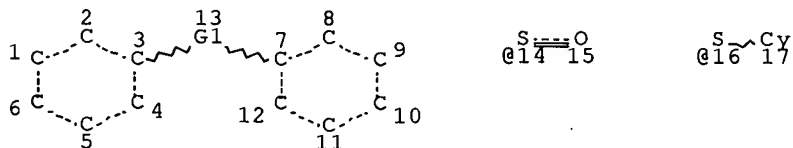
Please note that search-term pricing does apply when
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REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

L5

STR



VAR G1=14/16

NODE ATTRIBUTES:

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DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 17

GGCAT IS UNS AT 17

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

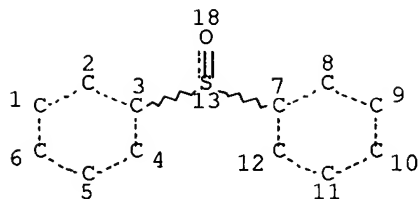
RSPEC I

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L8 7723 SEA FILE=REGISTRY SSS FUL L5

L9 STR



NODE ATTRIBUTES:

CONNECT IS E3 RC AT 13
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L12 3717 SEA FILE=REGISTRY SUB=L8 SSS FUL L9

100.0% PROCESSED 3920 ITERATIONS

3717 ANSWERS

SEARCH TIME: 00.00.01

L5 STR
 L8 7723 SEA FILE=REGISTRY SSS FUL L5
 L9 STR
 L12 3717 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
 L13 4006 SEA FILE=REGISTRY ABB=ON L8 NOT L12

FILE 'CAPLUS' ENTERED AT 11:26:35 ON 10 JUL 2007
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FILE COVERS 1907 - 10 Jul 2007 VOL 147 ISS 3
 FILE LAST UPDATED: 9 Jul 2007 (20070709/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

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L8          7723 SEA FILE=REGISTRY SSS FUL L5
L9          STR
L12         3717 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L13         4006 SEA FILE=REGISTRY ABB=ON  L8 NOT L12
L14         664  SEA FILE=CAPLUS ABB=ON  L13/P
L15         3586 SEA FILE=CAPLUS ABB=ON  L12
L17         1113 SEA FILE=CAPLUS ABB=ON  L15(L) RACT/RL
L18         206  SEA FILE=CAPLUS ABB=ON  L17 AND L14
L19         15019 SEA FILE=REGISTRY ABB=ON  MG/ELS AND X/ELS
L20         113786 SEA FILE=CAPLUS ABB=ON  L19
L22         17  SEA FILE=CAPLUS ABB=ON  L18 AND L20

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L9          STR
L12         3717 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
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L15         3586 SEA FILE=CAPLUS ABB=ON  L12
L17         1113 SEA FILE=CAPLUS ABB=ON  L15(L) RACT/RL
L18         206  SEA FILE=CAPLUS ABB=ON  L17 AND L14
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L32         3  SEA FILE=CAPLUS ABB=ON  L31 AND L18

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L9          STR
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L13         4006 SEA FILE=REGISTRY ABB=ON  L8 NOT L12
L14         664  SEA FILE=CAPLUS ABB=ON  L13/P
L15         3586 SEA FILE=CAPLUS ABB=ON  L12
L17         1113 SEA FILE=CAPLUS ABB=ON  L15(L) RACT/RL
L18         206  SEA FILE=CAPLUS ABB=ON  L17 AND L14
L33         21  SEA FILE=REGISTRY ABB=ON  CHLOROTRIMETHYLSILANE?/CN
L34         11637 SEA FILE=CAPLUS ABB=ON  L33
L35         11  SEA FILE=CAPLUS ABB=ON  L34 AND L18

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L5          STR
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L13         4006 SEA FILE=REGISTRY ABB=ON  L8 NOT L12
L14         664  SEA FILE=CAPLUS ABB=ON  L13/P
L15         3586 SEA FILE=CAPLUS ABB=ON  L12
L17         1113 SEA FILE=CAPLUS ABB=ON  L15(L) RACT/RL
L18         206  SEA FILE=CAPLUS ABB=ON  L17 AND L14
L36         182683 SEA FILE=REGISTRY ABB=ON  SI/ELS AND X/ELS AND C/ELS
L37         117457 SEA FILE=CAPLUS ABB=ON  L36
L38         21  SEA FILE=CAPLUS ABB=ON  L18 AND L37

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L51

27 (L22 OR L32 OR L35 OR L38) NOT L30

=> fil casrea; d stat que 149; s 149 not 145
 FILE 'CASREACT' ENTERED AT 11:26:49 ON 10 JUL 2007
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FILE CONTENT:1840 - 7 Jul 2007 VOL 147 ISS 3

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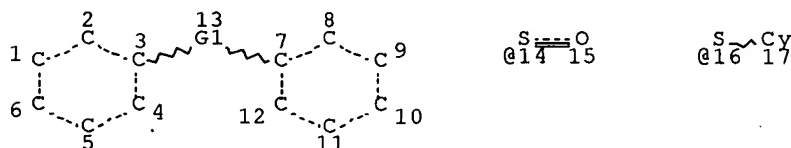
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*****
*
*   CASREACT now has more than 12 million reactions
*
*****
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Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L5

STR



VAR G1=14/16

NODE ATTRIBUTES:

CONNECT IS E3 RC AT 14

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 17

GGCAT IS UNS AT 17

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

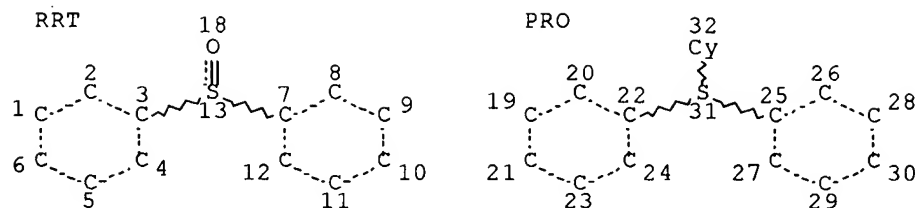
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

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L40 684 SEA FILE=CASREACT ABB=ON L8

L46 STR



NODE ATTRIBUTES:

CONNECT IS E3 RC AT 13
 DEFAULT MLEVEL IS ATOM
 GGCAT IS UNS AT 32
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I
 NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

L49 19 SEA FILE=CASREACT SUB=L40 SSS FUL L46 (114 REACTIONS)

100.0% DONE 1547 VERIFIED 114 HIT RXNS 19 DOCS
 SEARCH TIME: 00.00.01

L52 18 L49 NOT L45

=> dup rem 152,151

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 PROCESSING COMPLETED FOR L52
 PROCESSING COMPLETED FOR L51

L53 42 DUP-REM L52 L51 (3 DUPLICATES REMOVED)
 ANSWERS '1-18' FROM FILE CASREACT
 ANSWERS '19-42' FROM FILE CAPLUS

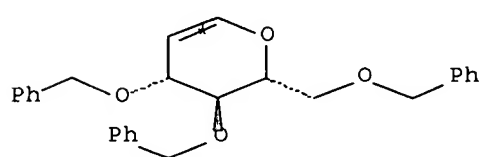
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L53 ANSWER 1 OF 42 CASREACT COPYRIGHT 2007 ACS on STN DUPLICATE 1
 ACCESSION NUMBER: 137:232835 CASREACT Full-text
 TITLE: C2-Amido-Glycosylation. Scope and Mechanism of Nitrogen Transfer
 AUTHOR(S): Liu, Jing; Gin, David Y.
 CORPORATE SOURCE: Department of Chemistry, University of Illinois at Urbana-Champaign, Urbana, IL, 61801, USA
 SOURCE: Journal of the American Chemical Society (2002), 124(33), 9789-9797
 CODEN: JACSAT; ISSN: 0002-7863

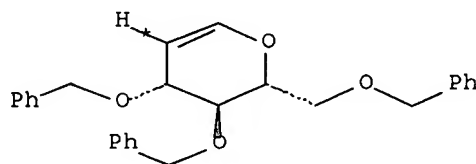
PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A one-pot C2-amido-glycosylation reaction for the synthesis of 2-N-acyl-2-deoxy- β -pyranosides from glycols is described. Glycol donors activated by the reagent combination of thianthrene-5-oxide and Tf₂O, followed by treatment with an amide nucleophile and a glycosyl acceptor, lead to the formation of various C2-amido-glycoconjugates. Both the C2-nitrogen transfer and the glycosidic bond formation proceed stereoselectively, allowing for the introduction of both natural and non-natural amide functionalities at C2 with concomitant anomeric bond formation in a one-pot procedure. Tracking of the reaction by low-temperature NMR spectroscopy employing ¹⁵N- and ¹⁸O-isotope labels suggests a mechanism involving the formation of the C2-sulfonium glycosyl imidate as well as oxazoline as key intermediates in this novel oxidative glycosylation process.

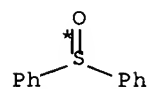
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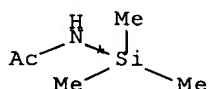
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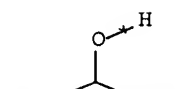
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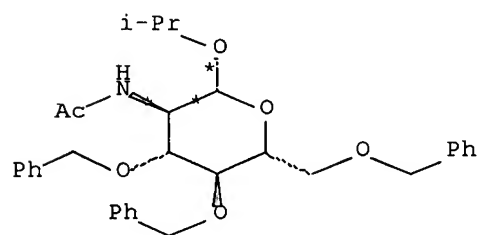
2 B



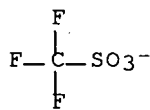
C



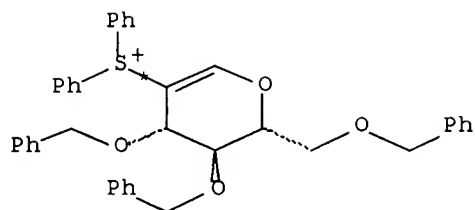
D



E
YIELD 15%



F: CM 1
YIELD 42%



F: CM 2
YIELD 42%

Ph—S—Ph

G
YIELD 17%

RX(1) RCT A 55628-54-1, B 945-51-7, C 13435-12-6, D 67-63-0

STAGE(1)

RGT H 358-23-6 (F3CSO₂)₂O, I 7087-68-5 EtN(Pr-i)₂
SOL 67-63-0 Me₂CHOH

STAGE(2)

RGT J 19172-47-5 Lawesson's reagent

PRO E 261518-24-5, F 444314-01-6, G 139-66-2

NTE stereoselective

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 2 OF 42 CASREACT COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 109:189923 CASREACT Full-text

TITLE: Deoxygenation of sulfoxides promoted by electrophilic
silicon reagents: preparation of aryl-substituted
sulfonium salts

AUTHOR(S): Miller, R. D.; Renaldo, A. F.; Ito, H.

CORPORATE SOURCE: Almaden Res. Cent., IBM Res. Div., San Jose, CA,
95120-6099, USA

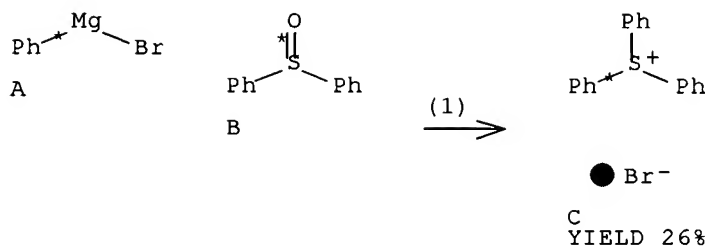
SOURCE: Journal of Organic Chemistry (1988), 53(23), 5571-3
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new one-step synthesis of triaryl and alkylarylsulfonium salts has been developed. Treatment of diaryl sulfoxides with Grignard reagents, in the presence of alkylsilicon reagents, gave the corresponding sulfonium salts in moderate yields. The reaction, performed under mild conditions, can tolerate a variety of functional groups. Significantly, the unsym. sulfonium salts were isolated without the complication of ligand exchange. The scope of this methodol. as well as possible synthetic utility is discussed.

RX(1) OF 15 A + B ==> C



RX(1) RCT A 100-58-3, B 945-51-7

STAGE(1)

RGT D 2857-97-8 Me3SiBr

SOL 75-09-2 CH2Cl2

STAGE(2)

RGT E 10035-10-6 HBr

SOL 7732-18-5 Water

PRO C 3353-89-7

L53 ANSWER 3 OF 42 CASREACT COPYRIGHT 2007 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 108:150552 CASREACT Full-text

TITLE: Reaction of silyl enol ethers with activated sulfoxides

AUTHOR(S): Hartke, Klaus; Teuber, Dorothee

CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn, D-3550, Fed. Rep. Ger.

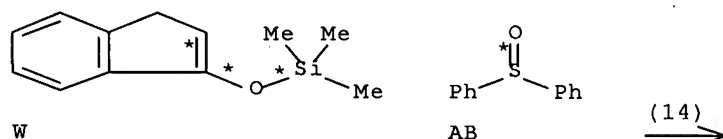
SOURCE: Liebigs Annalen der Chemie (1988), (3), 225-30
CODEN: LACHDL; ISSN: 0170-2041

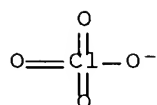
DOCUMENT TYPE: Journal

LANGUAGE: German

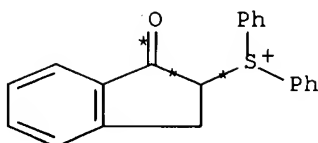
AB Silyl enol ethers react with sulfoxides in the presence of (CF₃CO)₂O to give α-sulfonic carbonyl compds., which have been isolated as perchlorates or tetraphenylborates. This transformation has been studied with the silyl enol ethers of cyclopentanone, cyclohexanone, and indanone as well as with some (silyloxy)butadienes.

RX(14) OF 35 W + AB ==> AC...





AC: CM 1
YIELD 20%



AC: CM 2
YIELD 20%

RX(14) RCT W 31928-64-0, AB 945-51-7

STAGE(1)

RGT E 407-25-0 (CF₃CO)₂O
SOL 75-09-2 CH₂Cl₂

STAGE(2)

RGT K 7791-03-9 LiClO₄
SOL 7732-18-5 Water

PRO AC 111661-86-0

L53 ANSWER 4 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 142:447832 CASREACT Full-text

TITLE: Sulfonium salt photoinitiators and use thereof

INVENTOR(S): Liu, Yuxia; Herr, Donald E.

PATENT ASSIGNEE(S): National Starch and Chemical Investment Holding Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005095528	A1	20050505	US 2003-700754	20031104
US 7230122	B2	20070612		
US 2005095531	A1	20050505	US 2004-918946	20040816
KR 2005043648	A	20050511	KR 2004-88840	20041103
EP 1538149	A2	20050608	EP 2004-26159	20041104
EP 1538149	A3	20050629		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU

CN 1637052	A	20050713	CN 2004-10098187	20041104
JP 2005187799	A	20050714	JP 2004-320965	20041104

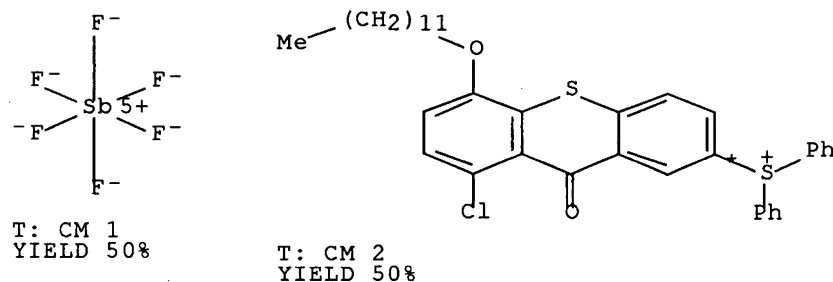
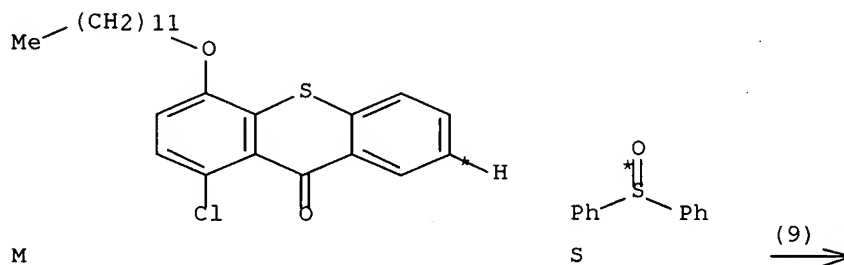
PRIORITY APPLN. INFO.:	US 2003-700754	20031104
	US 2004-918946	20040816

OTHER SOURCE(S): MARPAT 142:447832

AB Sulfonium salt photoinitiators with improved thermal stability, useful for UV-curable adhesives, coatings, and sealants, have structures containing 2 benzene rings bridged by a carbonyl group. A typical photoinitiator was manufactured by stirring 4 g 1-chloro-4-dodecyloxythioxanthone with 1.9 g di-Ph sulfoxide in a mixture of 50 mL CH₂Cl₂ and 30 mL Ac₂O at 0-10°, slowing

adding 4 g H₂SO₄, warming to room temperature stirring 48 h, adding 30 mL water and 2.5 g NaSbF₆, and stirring 12 h.

RX(9) OF 30 ...M + S ==> T



RX(9) RCT M 437769-30-7, S 945-51-7

STAGE(1)

RGT U 108-24-7 Ac₂O
SOL 75-09-2 CH₂Cl₂
CON 0 - 10 deg C

STAGE(2)

RGT D 7664-93-9 H₂SO₄
SOL 7732-18-5 Water
CON SUBSTAGE(1) 0 - 10 deg C
SUBSTAGE(2) 10 deg C -> room temperature
SUBSTAGE(3) 48 hours, room temperature

STAGE(3)

RGT V 16925-25-0 NaSbF₆
SOL 7732-18-5 Water
CON 12 hours, room temperature

PRO T 851047-70-6

NTE regioselective

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 5 OF 42 CASREACT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 142:463847 CASREACT Full-text
 TITLE: Synthesis, Characterization, and Photochemical
 Behavior of {Ru(arene)}₂⁺ Derivatives of
 α -[PW11039]7⁻: An Organometallic Way to
 Ruthenium-Substituted Heteropolytungstates
 AUTHOR(S): Artero, V.; Laurencin, D.; Villanneau, R.; Thouvenot,
 R.; Herson, P.; Gouzerh, P.; Proust, A.
 CORPORATE SOURCE: Laboratoire de Chimie Inorganique et Materiaux
 Moleculaires, UMR CNRS 7071, Universite Pierre et
 Marie Curie, Paris, 75252, Fr.
 SOURCE: Inorganic Chemistry (2005), 44(8), 2826-2835
 CODEN: INOCAJ; ISSN: 0020-1669
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Reaction of [Ru(arene)Cl₂]₂ (arene = benzene, toluene, p-cymene,
 hexamethylbenzene) with K₇[PW11039]·14H₂O provided two series of
 organometallic derivs. of heteropolytungstates: type-1 and type-2 complexes of
 general formulas [PW11039{Ru(arene)(H₂O)}]₅⁻ and
 [{PW11039{Ru(arene)}}₂(WO₂)]₈⁻, resp. All compds. were characterized by IR
 and multinuclear NMR (1H, 31P, 183W) spectroscopies. The crystal structures
 of Na₄K₄[{PW11039{Ru(benzene)}}₂(WO₂)]·6H₂O (NaK-2a·6H₂O),
 K₇H[{PW11039{Ru(toluene)}}₂(WO₂)]·4H₂O (K-2b·4H₂O), and Cs₃K₂[PW11039{Ru(p-
 cymene)(H₂O)}]₅⁻·4H₂O (CsK-1c·4H₂O) were obtained and revealed that the
 {Ru(arene)} fragment is supported on the oxometallic framework. Photochem.
 reactivity of [PW11039{Ru(arene)(H₂O)}]₅⁻ (arene = toluene, p-cymene) in the
 presence of various ligands L (L = H₂O, DMSO, tetramethylene sulfoxide, and
 di-Ph sulfoxide) was investigated, and led to the formation of
 [PW11039{Ru(L)}]₅⁻, in which the ruthenium is incorporated into the lacunary
 [PW11039]7⁻ anion.

RX(5) OF 18 ...N + Q ==> R

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

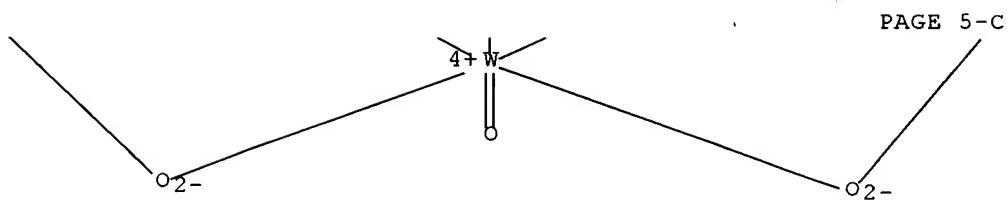
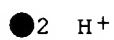
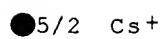
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

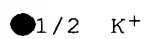
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

PAGE 5-A

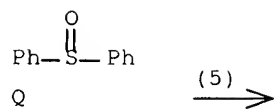


PAGE 5-D

PAGE 6-A



N



* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

PAGE 3-A

●5 Cs⁺

R
YIELD 57%

RX(5) RCT N 851591-79-2, Q 945-51-7

STAGE(1)

SOL 7789-20-0 D2O

CON 42 hours, room temperature

STAGE(2)

RGT E 7647-17-8 CsCl

CON room temperature

PRO R 851591-78-1

REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 6 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 145:62605 CASREACT Full-text

TITLE: Preparation of aryl-substituted sulfonium salts by
condensation of biphenyl sulfoxide with aromatic
compounds

AUTHOR(S): Liu, An-chang; Mo, Jian-hua; Huang, Shu-huai; Zou,
Jing

CORPORATE SOURCE: Department of Materials Science and Engineering,
Huazhong Science and Technology University, Wuhan,
430074, Peop. Rep. China

SOURCE: Journal of Shanghai University (2005), 9(4), 372-376
CODEN: JSUNFV; ISSN: 1007-6417

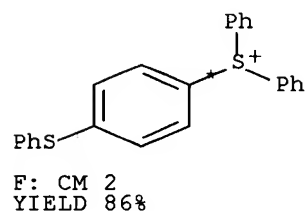
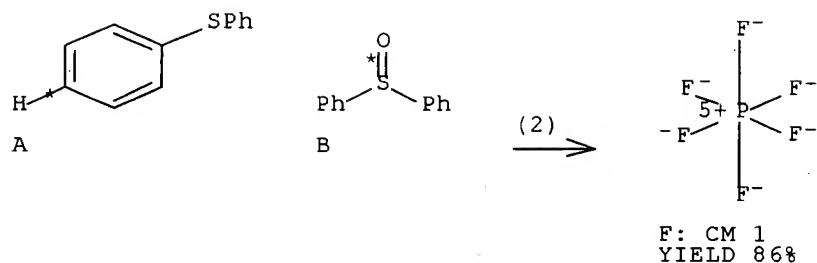
PUBLISHER: Shanghai University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Three kinds of aryl-substituted triphenylsulfonium salts were prepared by
condensation of di-Ph sulfoxide with di-Ph sulfide, di-Ph ether or 1,1'-
biphenyl in the presence of polyphosphoric acid as dehydrating agent. The
reaction conditions were mild (40-50°, 2-3 h), and the yield of 4-
(phenylthio)triphenylsulfonium hexafluorophosphate was 87.6%. The three kinds
of sulfonium salts show better curing character for epoxy resin.

RX(2) OF 7 ...A + B ==> F



RX(2) RCT A 139-66-2, B 945-51-7

STAGE(1)

CON SUBSTAGE(1) 2 - 3 hours, 40 - 50 deg C
SUBSTAGE(2) 3 hours, 40 - 50 deg C

STAGE(2)

RGT G 17084-13-8 KPF6
SOL 7732-18-5 Water
CON 30 minutes

PRO F 75482-18-7

NTE polyphosphoric acid used in stage 1, optimization study,
optimized on dehydrate agent PPA weight on the condensation
reaction

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 7 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 141:331673 CASREACT Full-text

TITLE: Electron-beam induced reactions of sulfonium salts in
a crystalline state

AUTHOR(S): Enomoto, Kazuyuki; Maekawa, Yasunari; Moon, Seong-Yun;
Shimoyama, Junji; Goto, Kazuyuki; Narita, Tadashi;
Yoshida, Masaru

CORPORATE SOURCE: Department of Chemistry, Faculty of Engineering, Gunma
University, Gunma, 376-8515, Japan

SOURCE: Journal of Photopolymer Science and Technology (2004),
17(1), 41-44

CODEN: JSTEEW; ISSN: 0914-9244

PUBLISHER: Technical Association of Photopolymers, Japan

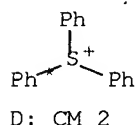
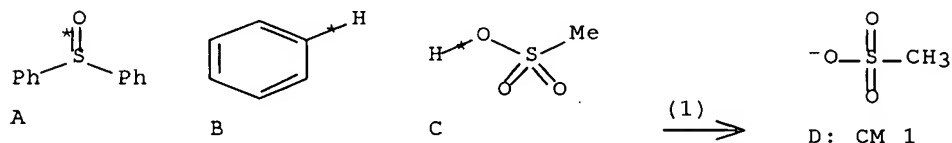
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The consumption rates of the sulfonium salts with aromatic counter anions were
suppressed by the crystalline lattice consisting of the bulky groups. The

greater decomposition rates of the sulfonium salts with aromatic counter anions than those of aliphatic counter anions in an amorphous state were elucidated by lower ionization potential of the salts with aromatic counter anions such as tosyl and naphthyl groups than those with aliphatic counter anions.

RX(1) OF 11 A + B + C ==> D...



RX(1) RCT A 945-51-7, B 71-43-2, C 75-75-2
 RGT E 1314-56-3 P2O5
 PRO D 231955-29-6
 SOL 75-75-2 MeSO3H

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 8 OF 42 CASREACT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 139:246323 CASREACT Full-text
 TITLE: Preparation of heterocycle-bearing onium salts and
 uses thereof
 INVENTOR(S): Ishihara, Masami; Urano, Yoji; Takahashi, Masahiro
 PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
 SOURCE: PCT Int. Appl., 113 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003074509	A1	20030912	WO 2002-JP10605	20021011
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002343973 A1 20030916 AU 2002-343973 20021011

EP 1481973 A1 20041201 EP 2002-775329 20021011

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1622943 A 20050601 CN 2002-828462 20021011

CN 1854133 A 20061101 CN 2006-10081844 20021011

TW 248930 B 20060211 TW 2002-91123790 20021016

TW 249077 B 20060211 TW 2005-94106894 20021016

US 2005233253 A1 20051020 US 2004-506485 20040902

JP 2006089476 A 20060406 JP 2005-263288 20050912

PRIORITY APPLN. INFO.:

JP 2002-56697 20020304

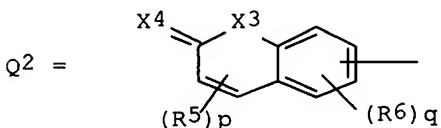
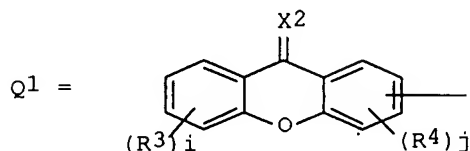
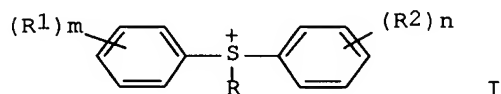
CN 2002-828462 20021011

JP 2003-572977 20021011

WO 2002-JP10605 20021011

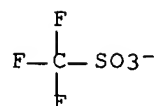
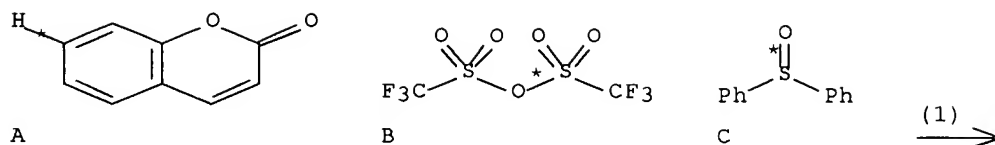
OTHER SOURCE(S): MARPAT 139:246323

GI

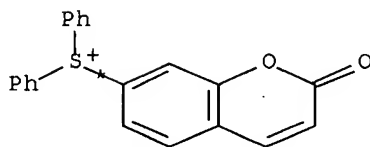


AB The salts I [R = Q¹, Q²; R¹-R⁶ = halo, (halogen- or aryl-substituted) alkyl, (halogen- or lower alkyl-substituted) aryl; X²-X⁴ = O, S; A = anion; m, n = 0-5; i = 0-4; j = 0-3; p = 0-2; q = 0-3], such as (coumarin-7-yl)diphenylsulfonium hexafluorophosphate and diphenyl(xanthene-9-one-2-yl)sulfonium hexafluorophosphate, are prepared. The salts are useful as cationic photopolymn. initiators or acid generators for chemical amplified resists.

RX(1) OF 10 A + B + C ==> D...



D: CM 1
YIELD 67%



D: CM 2
YIELD 67%

RX(1) RCT A 91-64-5, B 358-23-6, C 945-51-7
 PRO D 597583-40-9
 SOL 75-09-2 CH₂Cl₂
 CON SUBSTAGE(1) -70 - -60 deg C
 SUBSTAGE(2) -70 deg C -> room temperature
 SUBSTAGE(3) 2 hours, room temperature
 REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

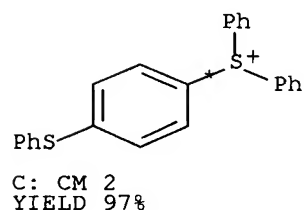
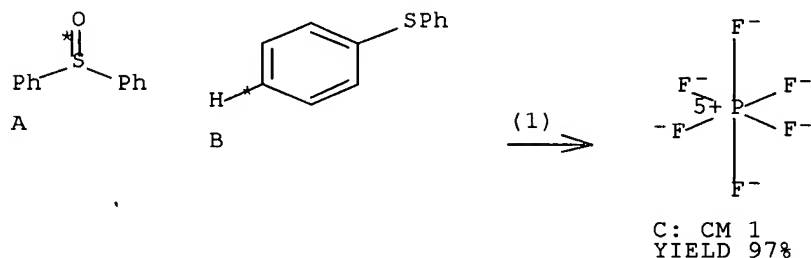
L53 ANSWER 9 OF 42 CASREACT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 137:46997 CASREACT Full-text
 TITLE: Process for producing arylsulfonium salt by
 condensation of diaryl sulfoxide with diaryl sulfide
 in presence of strong acid
 INVENTOR(S): Date, Masashi; Kimura, Hideki; Yamamoto, Jiro
 PATENT ASSIGNEE(S): San-Apro Limited, Japan
 SOURCE: PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002048101	A1	20020620	WO 2001-JP11042	20011217
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002241363	A	20020828	JP 2001-381430	20011214
JP 3837066	B2	20061025		
EP 1350789	A1	20031008	EP 2001-270525	20011217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2004030158	A1	20040212	US 2003-450517	20030616
US 7060858	B2	20060613		
PRIORITY APPLN. INFO.:				
			JP 2000-381963	20001215
			WO 2001-JP11042	20011217

OTHER SOURCE(S): MARPAT 137:46997

AB Disclosed is a process for directly producing the target arylsulfonium salt not via a metathesis step without using a large excess of an acid. The process comprises reacting an aryl compound (A) in which at least one of the carbon atoms of the aryl group has a hydrogen atom bonded thereto with a sulfoxide compound (B) represented by the formula R_1SOR_2 (wherein R_1 and R_2 may be the same or different and each represents an optionally substituted hydrocarbon or heterocyclic group) in the presence of a strong acid (C) represented by the formula $HMXmYn$ (wherein M represents a group IIIa or Va element of the periodic table; X represents halogeno; Y represents hydroxy; and m and n are integers satisfying the relationships $m+n=4$ and $0 \leq n \leq 3$ when M is a Group IIIa element or satisfying the relationships $m+n=6$ and $0 \leq n \leq 2$ when M is a Group Va element). This process gives the target arylsulfonium salts of high purity in high yields and can recover, e.g. acetic acid and acetic anhydride as solvent and dehydrating agent, resp., and is reduced in the amount of alkali required for neutralizing waste water as well as in the generation of waste liquid. Arylsulfonium salts are useful as photocationic polymerization initiators, photo-acid generator for resists, or thermal latent hardeners for epoxy resins (no data). Thus, 13.99 g acetic anhydride was gradually added dropwise to a mixture of di-Ph sulfoxide 4.05, acetic acid 4.05, and 75% aqueous hexafluorophosphoric acid 5.67 g under cooling, stirred for 30 min, and warmed to room temperature, followed by adding dropwise 3.61 g di-Ph sulfide, and the resulting mixture was stirred at room temperature for 1 h. The reaction mixture was heated to 70°, evaporated under reduced pressure to recover the solvent (4.5 g), cooled to room temperature, dissolved in 20 mL CH_2Cl_2 , washed once with 20 mL H_2O and three-times with 10 mL H_2O , and evaporated for removal of CH_2Cl_2 to give a tar (9.73 g, 94% purity) containing di-Ph sulfide and di-Ph sulfoxide as impurities in 97% yield. To the tar was added 10 mL ethanol and stirred upon which crystals precipitated. The crystals were filtered off and dried to give 8.96 g (4-phenylthiophenyl)diphenylsulfonium hexafluorophosphate ($\geq 99\%$).

RX(1) OF 9 A + B ==> C



RX(1) RCT A 945-51-7

STAGE(1)

RGT D 16940-81-1 H+ [PF6]-, E 108-24-7 Ac2O
SOL 7732-18-5 Water, 64-19-7 AcOH

STAGE(2)

RCT B 139-66-2

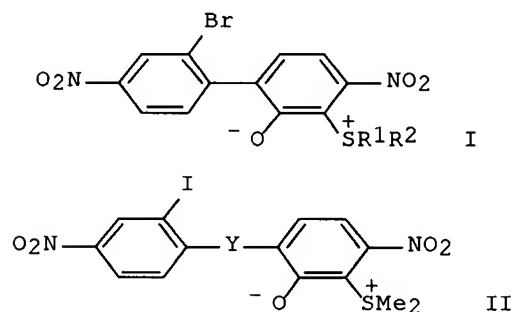
PRO C 75482-18-7

NTE under-cooling for 30 min; condensation at room temp. for 3 h

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

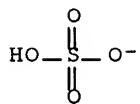
L53 ANSWER 10 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 134:162776 CASREACT Full-text
TITLE: Synthesis of stable 2-sulfonylphenolates
AUTHOR(S): Hou, Zijie; Wang, Sufang; Pan, Xianhua
CORPORATE SOURCE: Institute of Organic Chemistry and State Key
Laboratory of Applied, Lanzhou University, Lanzhou,
730000, Peop. Rep. China
SOURCE: Chinese Science Bulletin (2000), 45(16), 1480-1484
CODEN: CSBUEF; ISSN: 1001-6538
PUBLISHER: Science in China Press
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

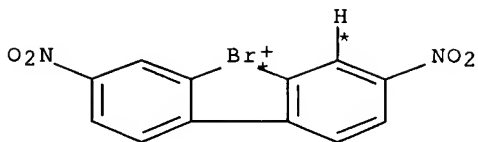


AB Stable 2-sulfonylphenolates I ($R_1 = R_2 = \text{Me, Pr, Bu, Ph}$; $R_1 = \text{Me, } R_2 = \text{Ph}$) and II ($Y = \sigma \text{ bond, O}$) were synthesized for the first time by the reactions of 3,7-dinitrodibenzobromolium bisulfate with some sulfoxides and the reactions of 3,7-dinitrodibenzocycloiodonium salts with DMSO under basic conditions. Their structures were established by elemental anal., NMR, MS, IR, etc. The role of the amine (or other basic compds., such as NaOH, Na_2CO_3 , etc.) in the reactions was discussed. A possible reaction mechanism was proposed, by which an unsym. substituted benzyne was presumed to be the reaction intermediate.

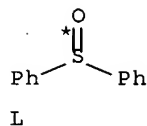
RX(4) OF 7 A + L ==> M



A: CM 1

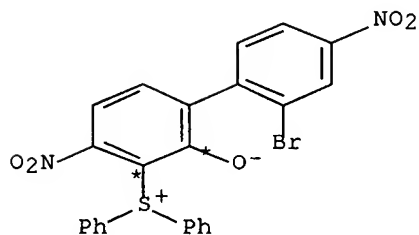


A: CM 2



L

(4) →

M
YIELD 81%

RX(4) RCT A 131822-40-7, L 945-51-7

STAGE(1)

RGT I 121-44-8 Et3N

STAGE(2)

SOL 7732-18-5 Water

STAGE(3)

SOL 141-78-6 AcOEt

PRO M 325480-83-9

REFERENCE COUNT:

9

THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 11 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 113:58341 CASREACT Full-text

TITLE: Photochemistry of triarylsulfonium salts

AUTHOR(S): Dektar, John L.; Hacker, Nigel P.

CORPORATE SOURCE: Almaden Res. Cent., IBM Res. Div., San Jose, CA,
95120-6099, USASOURCE: Journal of the American Chemical Society (1990),
112(16), 6004-15

CODEN: JACSAT; ISSN: 0002-7863

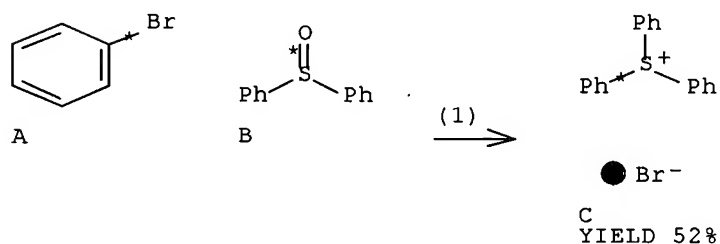
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The photolysis of triphenylsulfonium, tris(4-methylphenyl)sulfonium, tris(4-chlorophenyl)sulfonium, several monosubstituted (4-F, 4-Cl, 4-Me, 4-MeO, 4-PhS, and 4-PhCO), and disubstituted [4,4'-Me2 and 4,4'-(MeO)2] triphenylsulfonium salts was examined in solution. Direct irradiation of triphenylsulfonium salts produced new rearrangement products,

phenylthiobiphenyls, along with di-Ph sulfide, which had been previously reported. Similarly, the triarylsulfonium salts, with the exception of the [4-(phenylthio)phenyl]diphenylsulfonium salts, gave the new rearrangement products. The mechanism for direct photolysis is proposed to occur from the singlet excited state to give a predominant heterolytic cleavage along with some homolytic cleavage. The heterolytic cleavage gives Ph cation and di-Ph sulfide, whereas homolytic cleavage gives the singlet Ph radical and diphenylsulfinyl radical cation pair. These pairs of intermediates then produce the observed photoproducts by an in-cage recombination mechanism and also by reactions with the solvent. The effect of solvent viscosity, solvent polarity, anion, and aryl substituent was examined. The triplet sensitization of the sulfonium salts was also investigated. In contrast to previous reports, the triplet state of the sulfonium salt is labile, leading to a triplet geminate radical pair of Ph radical and diphenylsulfinyl radical cation. These species ultimately form benzene and di-Ph sulfide as products. Direct photolysis of the [4-(phenylthio)phenyl]diphenylsulfonium salt gave exclusively di-Ph sulfide, benzene, and acid and decomp. via the triplet excited state.

RX(1) OF 3 A + B ==> C



RX(1) RCT A 108-86-1

STAGE(1)

RGT D 7439-95-4 Mg
SOL 60-29-7 Et2O

STAGE(2)

RCT B 945-51-7
SOL 71-43-2 Benzene, 142-82-5 Heptane

STAGE(3)

RGT E 10035-10-6 HBr
SOL 7732-18-5 Water

PRO C 3353-89-7

L53 ANSWER 12 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 113:23235 CASREACT Full-text

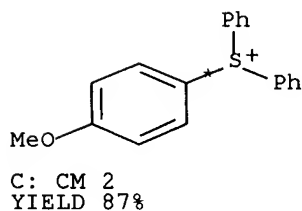
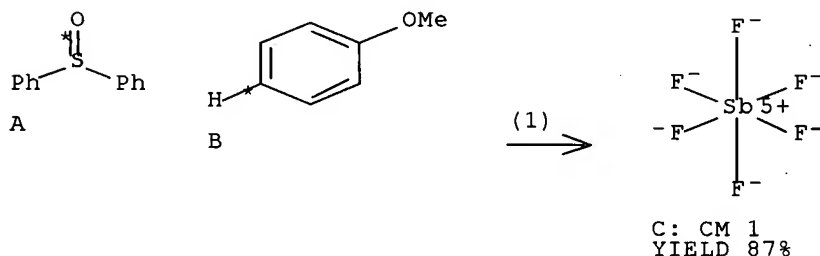
TITLE: Synthesis of aryl-substituted sulfonium salts by the
phosphorus pentoxide-methanesulfonic acid promoted
condensation of sulfoxides with aromatic compounds

AUTHOR(S): Akhtar, S. R.; Crivello, J. V.; Lee, J. L.

CORPORATE SOURCE: Dep. Chem., Rensselaer Polytech. Inst., Troy, NY,
12180, USA
SOURCE: Journal of Organic Chemistry (1990), 55(13), 4222-5
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A versatile new method which has been developed for the synthesis of aryl-substituted sulfonium salts in high yields by the direct condensation of sulfoxides with aromatic compds. in the presence of a mixture of P2O5 and methanesulfonic acid was reported. Reaction proceeded in 1-3 h at 25-40° under homogeneous conditions to yield the sulfonium salts on subsequent workup in water. A variety of representative dialkyl monoaryl, triaryl and bisulfonium salts were prepared by this method. The sulfonium salts are photoactive and have applications as photoinitiators for cationic polymerization

RX(1) OF 17 A + B ==> C



RX(1) RCT A 945-51-7, B 100-66-3

STAGE(1)

RGT D 1314-56-3 P2O5, E 75-75-2 MeSO3H

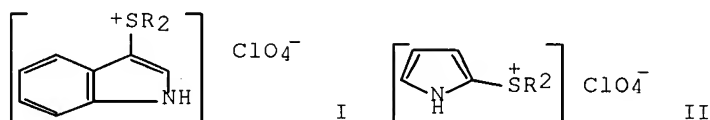
STAGE(2)

RGT F 16925-25-0 NaSbF6

PRO C 127279-74-7

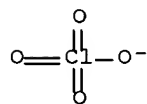
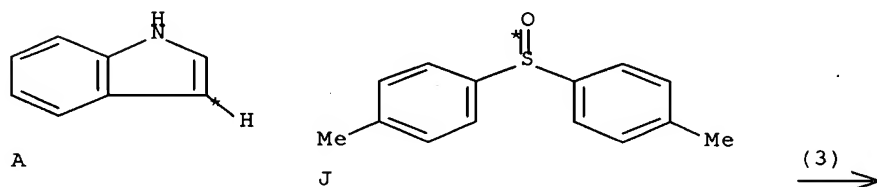
L53 ANSWER 13 OF 42 CASREACT COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 109:128768 CASREACT Full-text

TITLE: Indole- and pyrrolesulfonium ylides
 AUTHOR(S): Hartke, Klaus; Teubber, Dorothee; Gerber, Dieter
 CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn,
 D-3550, Fed. Rep. Ger.
 SOURCE: Tetrahedron (1988), 44(11), 3261-70
 CODEN: TETRAB; ISSN: 0040-4020
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

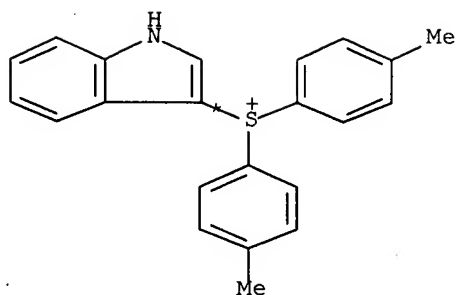


AB Electrophilic substitution of indole and pyrrole with sulfoxides and acid anhydrides leads to the formation of indole-3-sulfonium salts I (R = Me, CH₂Ph, Ph, 4-MeC₆H₄; SR₂ = tetrahydrothiopheno, thioxano) and pyrrole-2-sulfonium salts II (R = same). These are deprotonated with K₂CO₃ to give the corresponding ylides. An indole-2-sulfonium ylide was obtained by methylation and subsequent deprotonation of 2-(methylthio)indole.

RX(3) OF 29 A + J ==> K



K: CM 1
 YIELD 71%



K: CM 2
YIELD 71%

RX(3) RCT A 120-72-9, J 1774-35-2

STAGE(1)

RGT D 407-25-0 (CF₃CO)₂O
SOL 75-09-2 CH₂Cl₂

STAGE(2)

RGT E 7791-03-9 LiClO₄
SOL 7732-18-5 Water

PRO K 107670-05-3

L53 ANSWER 14 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 109:37562 CASREACT Full-text

TITLE: Electrophilic substitution of benzofulvenes with activated sulfoxides

AUTHOR(S): Teuber, Dorothee; Hartke, Klaus

CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg, D-3550, Fed. Rep. Ger.

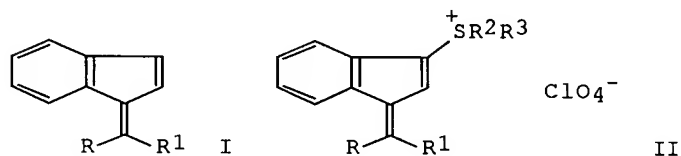
SOURCE: Liebigs Annalen der Chemie (1988), (1), 39-42

CODEN: LACHDL; ISSN: 0170-2041

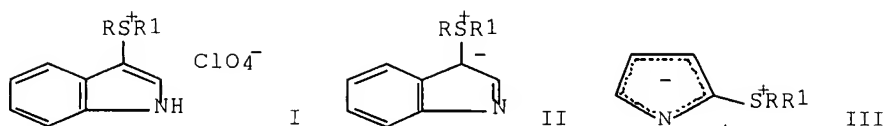
DOCUMENT TYPE: Journal

LANGUAGE: German

GI

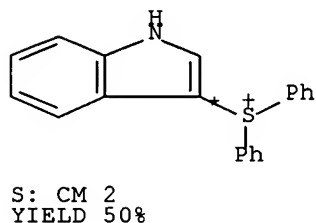
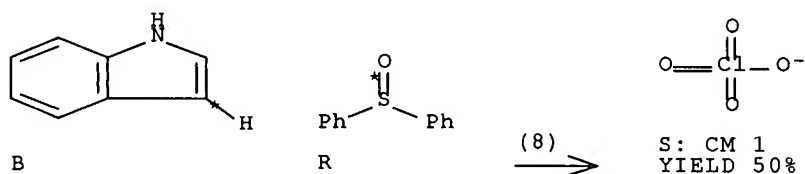


AB The benzofulvenes I ($R = R_1 = \text{Ph, Me, EtO, MeS}$; $R = \text{Me, } R_1 = \text{Ph}$) were treated with $R_2R_3\text{SO}$ [$R_2 = R_3 = \text{Me, PhCH}_2, \text{Ph, p-MeC}_6\text{H}_4$; $R_2 = R_3 = (\text{CH}_2)_4, \text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$] in presence of $(\text{F}_3\text{CCO})_2\text{O}$ followed by aqueous LiClO_4 to give the sulfoniobenzofulvene perchlorates II.



AB RR1SO [R = R1 = Me, Ph, PhCH2, 4-MeC6H4; RR1 = (CH2)4, (CH2)2O(CH2)2] reacted with indole to give indolylsulfonium salts I in 53-100% yields. Deprotonation of I gave sulfonioidolides II. Similarly, pyrrole reacted with RR1SO to give 2-pyrrolylsulfonium salts, which on deprotonation gave sulfoniopyrrolides III.

RX(8) OF 33 B + R ==> S



RX(8) RCT B 120-72-9, R 945-51-7

STAGE(1)

RGT D 407-25-0 (CF3CO)2O
SOL 75-09-2 CH2Cl2

STAGE(2)

RGT E 7791-03-9 LiClO4
SOL 7732-18-5 Water

PRO S 107670-03-1

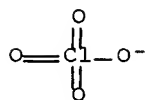
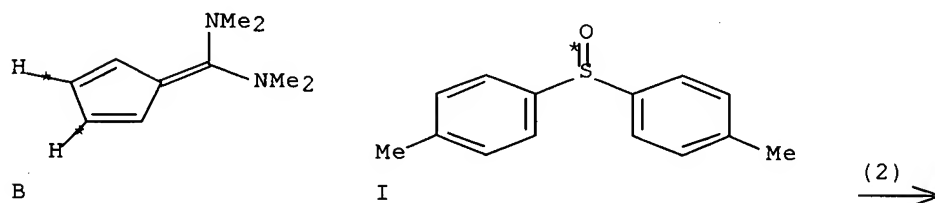
L53 ANSWER 16 OF 42 CASREACT COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 104:33781 CASREACT Full-text
 TITLE: Reaction of fulvenes with activated sulfoxides
 AUTHOR(S): Morick, Wolfgang; Hartke, Klaus
 CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn,
 D-3550, Fed. Rep. Ger.
 SOURCE: Chemische Berichte (1985), 118(12), 4830-41

DOCUMENT TYPE: CODEN: CHBEAM; ISSN: 0009-2940
 LANGUAGE: Journal
 German
 GI

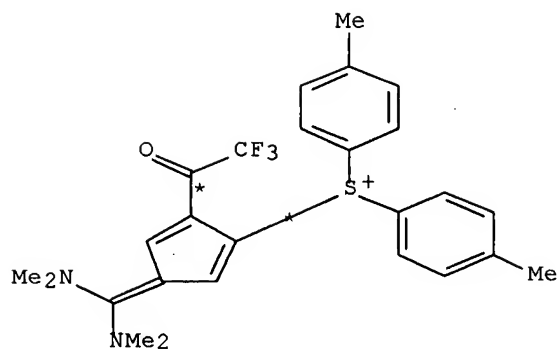
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Heterosubstituted fulvenes, such as 6,6-bis(dimethylamino)fulvene, 6-(dimethylamino)fulvene, and 6,6-diethoxyfulvene, react with dimethylsulfoxide/trifluoroacetic anhydride to form the bissulfoniofulvenes I, II, III, and IV; with aromatic sulfoxides/trifluoroacetic anhydride only the acylated monosulfoniofulvenes V (R = p-MeC₆H₄, Ph) are obtained. Under similar reaction conditions 6,6-dimethyl- and 6,6-diphenylfulvene were transformed into the monosulfoniofulvenes VI [R₁ = Me, Ph; R₂ = Me, Ph, p-MeC₆H₄, p-BrC₆H₄, R₂₂ = (CH₂)₅]. The salts VI (R = Ph) add hydride, methoxide, or cyanide to give 2-substituted sulfoniocyclopentadienides.

RX(2) OF 37 B + I ==> J



J: CM 1



J: CM 2

RX(2) RCT B 703-24-2, I 1774-35-2

STAGE(1)

RGT E 407-25-0 (CF₃CO)₂OSOL 75-09-2 CH₂Cl₂

STAGE(2)

RGT F 7791-03-9 LiClO₄

SOL 7732-18-5 Water

PRO J 99544-69-1

L53 ANSWER 17 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 104:88153 CASREACT Full-text

TITLE: Monosulfonio- and trissulfoniocyclopentadienides

AUTHOR(S): Hartke, Klaus; Morick, Wolfgang

CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn, D-3550, Fed. Rep. Ger.

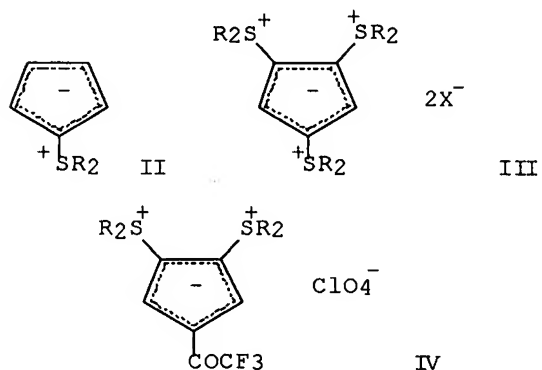
SOURCE: Chemische Berichte (1985), 118(12), 4821-9

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

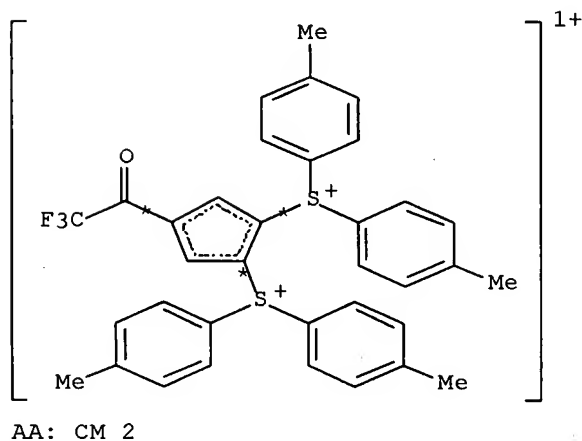
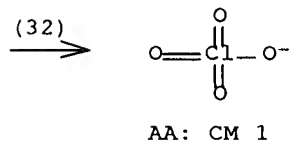
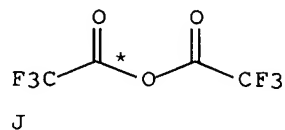
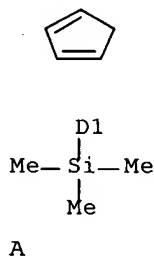
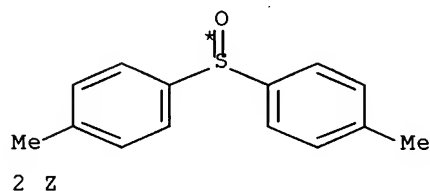
LANGUAGE: German

GI



AB (Trimethylsilyl)cyclopentadiene (I) and 5,5-bis(trimethylsilyl)cyclopentadiene react with aliphatic and cycloaliph. sulfoxides to form the monosulfoniocyclopentadienides II [$R = \text{Me}$, $R_2 = (\text{CH}_2)_4$, $(\text{CH}_2)_5$, $\text{CH}_2\text{CH}_2\text{OCH}_2$]; in the presence of $(\text{F}_3\text{CCO})_2\text{O}$ or SOCl_2 the trissulfoniocyclopentadienides III ($X = \text{F}_3\text{CCO}_2$, Cl , ClO_4) are obtained. Me_2SO and tetramethylene sulfoxide also condense with cyclopentadiene/ $(\text{F}_3\text{CCO})_2\text{O}$ directly to yield III [$R = \text{Me}$, $= (\text{CH}_2)_4$; $X = \text{ClO}_4$]. In the reaction of I with di-p-tolyl sulfoxide/ $(\text{F}_3\text{CCO})_2\text{O}$ the bissulfoniocyclopentadienide IV ($R = \text{p-MeC}_6\text{H}_4$) isolated.

RX(32) OF 46 2 Z + A + J \implies AA



RX(32) RCT Z 1774-35-2, A 25134-15-0, J 407-25-0

STAGE(1)

SOL 75-09-2 CH2Cl2

STAGE(2)

RGT K 7791-03-9 LiClO4

SOL 7732-18-5 Water

PRO AA 100502-93-0

L53 ANSWER 18 OF 42 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 102:184743 CASREACT Full-textTITLE: Reaction of cyclopentadiene,
trimethylsilylcyclopentadiene and fulvenes with
sulfoxides and trifluoroacetic anhydride

AUTHOR(S): Hartke, Klaus; Morick, Wolfgang

CORPORATE SOURCE: Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn,
D-3550, Fed. Rep. Ger.

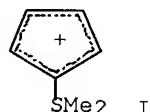
SOURCE: Tetrahedron Letters (1984), 25(52), 5985-8

CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

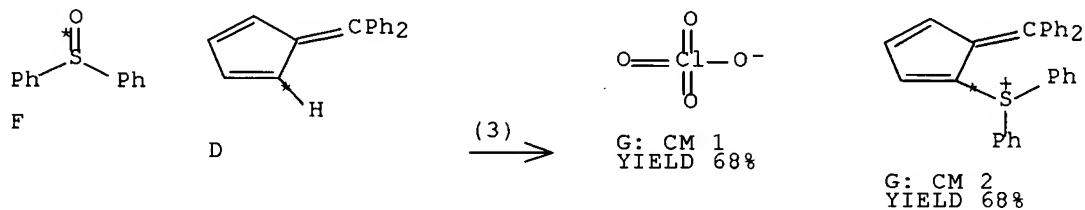
LANGUAGE: German

GI



AB Cyclopentadiene, trimethylsilylcyclopentadiene, and fulvenes react with dialkyl, diaryl, or cyclic sulfoxides in the presence of (F3CCO)2O to form mono-, bis-, or tris-sulfonio substituted derivs., e.g., I.

RX(3) OF 5 F + D ==> G



RX(3) RCT F 945-51-7, D 2175-90-8
PRO G 96284-52-5

L53 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:841298 CAPLUS Full-text

DOCUMENT NUMBER: 145:281058

TITLE: Chemically amplified positive resist composition and patterning process

INVENTOR(S): Ohsawa, Youichi; Maeda, Kazunori; Watanabe, Satoshi

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 22pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006188810	A1	20060824	US 2006-354204	20060215
JP 2006227331	A	20060831	JP 2005-41587	20050218
KR 2006093056	A	20060823	KR 2006-15487	20060217
PRIORITY APPLN. INFO.:			JP 2005-41587	A 20050218

ED Entered STN: 24 Aug 2006

AB A chemical amplified pos. resist composition is provided comprising (A) a resin containing acid labile groups other than acetal type which changes its solubility in an alkaline developer as a result of the acid labile groups being eliminated under the action of acid and (B) specific sulfonium salts as a photoacid generator. The composition is improved in resolution and focus latitude, minimized in line width variation and profile degradation even on prolonged PED, improved in pattern profile after development, minimized in pattern feature size variation within the wafer plane by uneven development and thus best suited in the deep-UV lithog.

IT 866942-45-2P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified pos. resist composition containing)

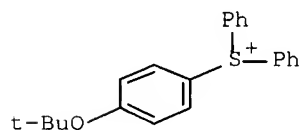
RN 866942-45-2 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157089-25-3

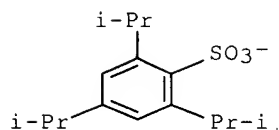
CMF C22 H23 O S



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



IT 258342-00-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified pos. resist composition containing)

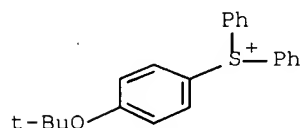
RN 258342-00-6 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM. 1

CRN 157089-25-3

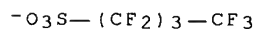
CMF C22 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



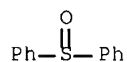
IT 945-51-7, Diphenyl sulfoxide 132098-25-0,
4-tert-Butoxyphenyl magnesium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of photoacid generator for chemical amplified pos. resist composition)

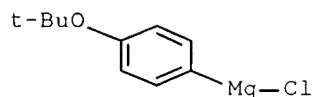
RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



RN 132098-25-0 CAPLUS

CN Magnesium, chloro[4-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)



INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 866942-45-2P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified pos. resist composition containing)

IT 258342-00-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified pos. resist composition containing)

IT 945-51-7, Diphenyl sulfoxide 6553-96-4, 2,4,6-

Triisopropylbenzenesulfonyl chloride 29420-49-3 132098-25-0,
4-tert-Butoxyphenyl magnesium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of photoacid generator for chemical amplified pos. resist composition)

L53 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:787244 CAPLUS Full-text

DOCUMENT NUMBER: 145:212807

TITLE: Photocurable ink composition, inkjet recording method,
printed material, method for producing planographic
printing plate, and planographic printing plate

INVENTOR(S): Tsuchimura, Tomotaka; Shimada, Kazuto

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 103pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1688467	A1	20060809	EP 2006-2252	20060203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2006241435	A	20060914	JP 2005-376273	20051227
US 2006178449	A1	20060810	US 2006-346424	20060203
PRIORITY APPLN. INFO.:			JP 2005-29560	A 20050204
			JP 2005-376273	A 20051227

ED Entered STN: 10 Aug 2006

AB An photocurable ink composition with increased storage stability, curing speed, and cured ink adhesion to substrate comprises a triarylsulfonium salt polymerization initiator containing at least one aryl skeleton having an electron attractive group as a substituent [e.g., tris(4-chlorophenyl)sulfonium hexafluorophosphate], a photopolymerizable compound, a sensitizing dye, and a colorant.

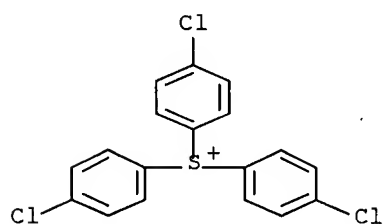
IT 125428-43-5P, Tris(4-chlorophenyl)sulfonium bromide

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(curing catalyst precursor; photocurable jet-printing inks with improved storage stability, curing speed, and cured ink adhesion to substrates)

RN 125428-43-5 CAPLUS

CN Sulfonium, tris(4-chlorophenyl)-, bromide (9CI) (CA INDEX NAME)



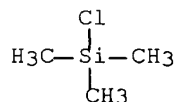
IT 75-77-4, Trimethylchlorosilane, reactions 3085-42-5, Bis(4-chlorophenyl) sulfoxide 143028-36-8, Bis[4-(trifluoromethyl)phenyl] sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)

(curing catalyst precursor; photocurable jet-printing inks with improved storage stability, curing speed, and cured ink adhesion to substrates)

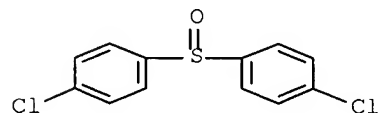
RN 75-77-4 CAPLUS

CN Silane, chlorotrimethyl- (CA INDEX NAME)



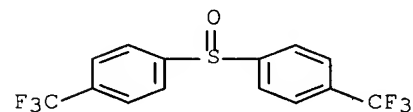
RN 3085-42-5 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-chloro- (9CI) (CA INDEX NAME)

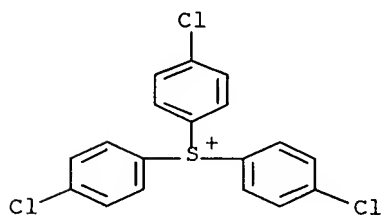


RN 143028-36-8 CAPLUS

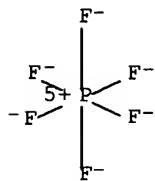
CN Benzene, 1,1'-sulfinylbis[4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



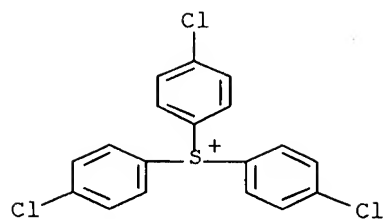
IT 441793-43-7P, Tris(4-chlorophenyl)sulfonium hexafluorophosphate
 709037-31-0P, Tris(4-chlorophenyl)sulfonium 2-naphthalenesulfonate
 903906-86-5P 903906-87-6P 903906-89-8P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (curing catalyst; photocurable jet-printing inks with improved storage
 stability, curing speed, and cured ink adhesion to substrates)
 RN 441793-43-7 CAPLUS
 CN Sulfonium, tris(4-chlorophenyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX
 NAME)
 CM 1
 CRN 125853-07-8
 CMF C18 H12 Cl3 S



CM 2
 CRN 16919-18-9
 CMF F6 P
 CCI CCS



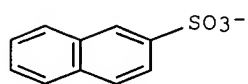
RN 709037-31-0 CAPLUS
 CN Sulfonium, tris(4-chlorophenyl)-, 2-naphthalenesulfonate (9CI) (CA INDEX
 NAME)
 CM 1
 CRN 125853-07-8
 CMF C18 H12 Cl3 S



CM 2

CRN 16023-36-2

CMF C10 H7 O3 S



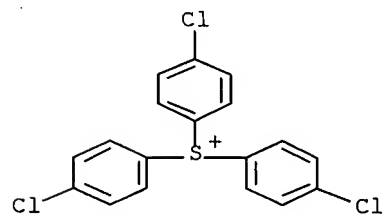
RN 903906-86-5 CAPLUS

CN Sulfonium, tris(4-chlorophenyl)-, tetrakis(pentafluorophenyl)borate(1-)
(9CI) (CA INDEX NAME)

CM 1

CRN 125853-07-8

CMF C18 H12 Cl3 S

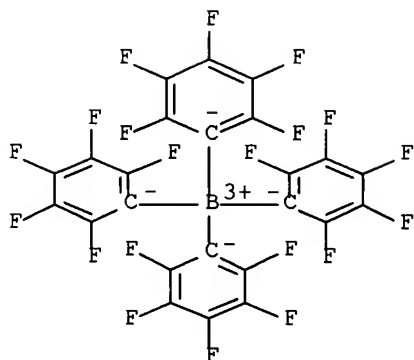


CM 2

CRN 47855-94-7

CMF C24 B F20

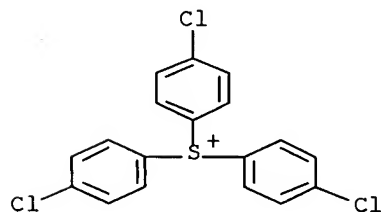
CCI CCS



RN 903906-87-6 CAPLUS
 CN Sulfonium, tris(4-chlorophenyl)-, tetrakis[3,5-bis(trifluoromethyl)phenyl]borate(1-) (9CI) (CA INDEX NAME)

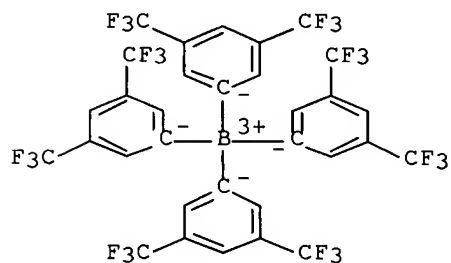
CM 1

CRN 125853-07-8
 CMF C18 H12 Cl3 S



CM 2

CRN 79230-20-9
 CMF C32 H12 B F24
 CCI CCS

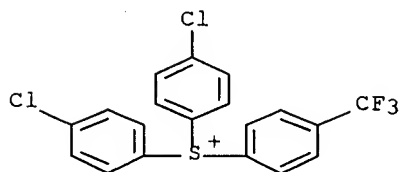


RN 903906-89-8 CAPLUS
 CN Sulfonium, bis(4-chlorophenyl)[4-(trifluoromethyl)phenyl]-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 903906-88-7

CMF C19 H12 Cl2 F3 S

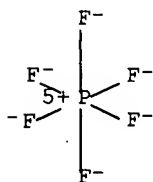


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 42-12 (Coatings, Inks, and Related Products)

IT 125428-43-5P, Tris(4-chlorophenyl)sulfonium bromide

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(curing catalyst precursor; photocurable jet-printing inks with improved storage stability, curing speed, and cured ink adhesion to substrates)

IT 75-77-4, Trimethylchlorosilane, reactions 106-39-8,
 4-Bromochlorobenzene 328-70-1, 1-Bromo-3,5-bis(trifluoromethyl)benzene
 532-02-5, Sodium 2-naphthalenesulfonate 3085-42-5,
 Bis(4-chlorophenyl) sulfoxide 17084-13-8, Potassium hexafluorophosphate
 19752-55-7, 1-Bromo-3,5-dichlorobenzene 79060-88-1, Sodium
 tetrakis[3,5-bis(trifluoromethyl)phenyl]borate 89171-23-3, Potassium
 tetrakis(pentafluorophenyl)borate 143028-36-8,
 Bis[4-(trifluoromethyl)phenyl] sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)

(curing catalyst precursor; photocurable jet-printing inks with improved storage stability, curing speed, and cured ink adhesion to substrates)

IT 441793-43-7P, Tris(4-chlorophenyl)sulfonium hexafluorophosphate
 709037-31-0P, Tris(4-chlorophenyl)sulfonium 2-naphthalenesulfonate
 903906-86-5P 903906-87-6P 903906-89-8P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(curing catalyst; photocurable jet-printing inks with improved storage stability, curing speed, and cured ink adhesion to substrates)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:214891 CAPLUS Full-text

DOCUMENT NUMBER: 145:198689

TITLE: Synthesis of reactive chemical additives for functional nanoimprinted polymer film

AUTHOR(S): Koylu, Damla; Jhaveri, Sarav B.; Carter, Kenneth R.

CORPORATE SOURCE: Polymer Science and Engineering Department, Conte Center for Polymer Research, University of Massachusetts - Amherst, Amherst, MA, 01003, USA
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2006), 47(1), 548
CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

ED Entered STN: 09 Mar 2006

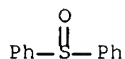
AB Synthesized triphenylsulfonium salts were used for incorporation as additives in functional polymer films, particularly as a monomer and a photoacid generator. Sulfoxide functionality along with methacrylate (monomer) functionality were incorporated in the same mol. to obtain a photoacid monomer mol. 2H-pyran-3,4-dihydro(8CI,9CI) was used in order to protect the alc. group of 4-bromo benzyl alc. Grignard reaction was carried out on the alc. protected bromide followed by addition of phenylsulfoxide. Incorporation of the photoacid monomer within crosslinked films and nanostructures has the ability to produce films that can generate acid upon photolysis.

IT 945-51-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of reactive chemical additives for functional nanoimprinted polymer film)

RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)

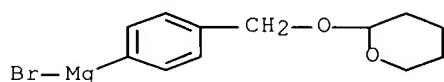


IT 195388-58-0P 903515-14-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of reactive chemical additives for functional nanoimprinted polymer film)

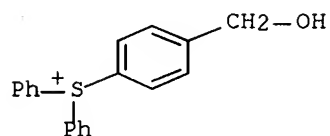
RN 195388-58-0 CAPLUS

CN Magnesium, bromo[4-[[tetrahydro-2H-pyran-2-yl)oxy)methyl]phenyl]- (9CI)
(CA INDEX NAME)



RN 903515-14-0 CAPLUS

CN Sulfonium, [4-(hydroxymethyl)phenyl]diphenyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

IT 903515-16-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of reactive chemical additives for functional nanoimprinted polymer film)

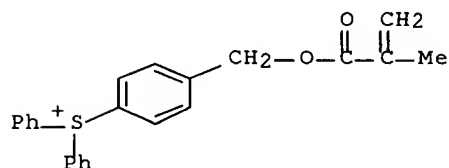
RN 903515-16-2 CAPLUS

CN Sulfonium, [4-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]phenyl]diphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 903515-15-1

CMF C23 H21 O2 S

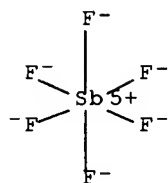


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 110-87-2 873-75-6 920-46-7 945-51-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis of reactive chemical additives for functional nanoimprinted polymer film)

IT 195388-58-0P 903515-14-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of reactive chemical additives for functional nanoimprinted polymer film)

IT 903515-16-2P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (synthesis of reactive chemical additives for functional nanoimprinted polymer film)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:1132733 CAPLUS Full-text
 DOCUMENT NUMBER: 143:396343
 TITLE: Chemically amplified positive resist composition and patterning process
 INVENTOR(S): Koitabashi, Ryuji; Watanabe, Satoshi; Ohsawa, Youichi
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 20 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005233245	A1	20051020	US 2005-105457	20050414
JP 2005326833	A	20051124	JP 2005-113115	20050411
KR 2006045709	A	20060517	KR 2005-31059	20050414
US 2007037091	A1	20070215	US 2006-583041	20061019
PRIORITY APPLN. INFO.:			JP 2004-120635	A 20040415
			US 2005-105457	A1 20050414

ED Entered STN: 21 Oct 2005

AB A chemical amplified pos. resist composition contains a specific sulfonium 2,4,6-triisopropylbenzenesulfonate compound as a photoacid generator where the sulfonium group is selected from (4-methylphenyl)diphenyl sulfonium, tris(4-methylphenyl) sulfonium, (4-tert-butylphenyl)diphenyl sulfonium, (4-tert-butoxyphenyl)diphenyl sulfonium, or 10-phenylphenoxthinium sulfonium. The resist also contains a polymer which changes its solubility in an alkaline developer under the action of acid, and a basic compound A Markush structure for the polymer is given. The resist has a high sensitivity, a high contrast of dissoln. of resist film, a high resolution, and good storage stability.

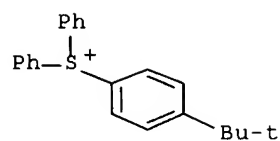
IT 754191-59-8P 866942-43-0P 866942-44-1P
 866942-45-2P 866942-47-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (chemical amplified pos. resist composition and patterning process)

RN 754191-59-8 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, 2,4,6-tris(1-methylethyl)benzenesulfonate (1:1) (CA INDEX NAME)

CM 1

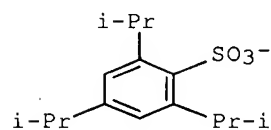
CRN 66482-54-0
 CMF C22 H23 S



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



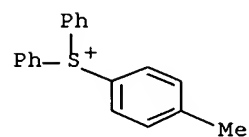
RN 866942-43-0 CAPLUS

CN Sulfonium, (4-methylphenyl)diphenyl-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47045-31-8

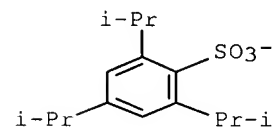
CMF C19 H17 S



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



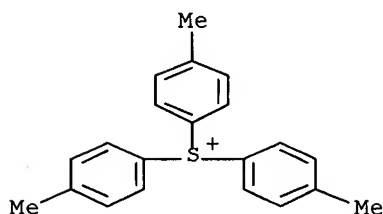
RN 866942-44-1 CAPLUS

CN Sulfonium, tris(4-methylphenyl)-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47197-43-3

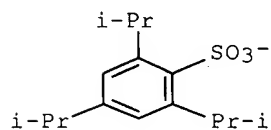
CMF C21 H21 S



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



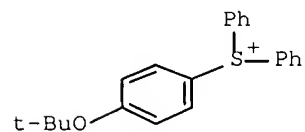
RN 866942-45-2 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 157089-25-3

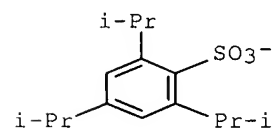
CMF C22 H23 O S



CM 2

CRN 46950-23-6

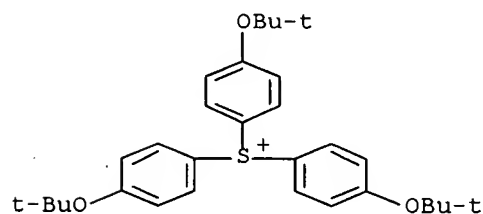
CMF C15 H23 O3 S



RN 866942-47-4 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with
 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

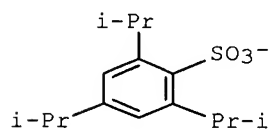
CM 1

CRN 137455-55-1
 CMF C30 H39 O3 S

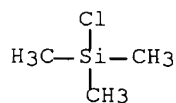


CM 2

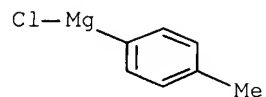
CRN 46950-23-6
 CMF C15 H23 O3 S



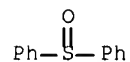
IT 75-77-4, Trimethylsilyl chloride, reactions 696-61-7,
 4-Methylphenylmagnesium chloride 945-51-7, Diphenyl sulfoxide
 132098-25-0, 4-tert-Butoxyphenylmagnesium chloride
 686774-01-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chemical amplified pos. resist composition and patterning process)
 RN 75-77-4 CAPLUS
 CN Silane, chlorotrimethyl- (CA INDEX NAME)



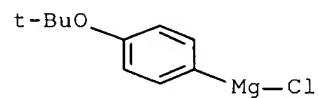
RN 696-61-7 CAPLUS
 CN Magnesium, chloro(4-methylphenyl)- (CA INDEX NAME)



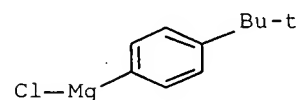
RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



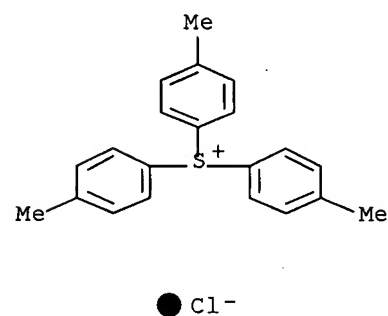
RN 132098-25-0 CAPLUS
 CN Magnesium, chloro[4-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 686774-01-6 CAPLUS
 CN Magnesium, chloro[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)



IT 22417-22-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (chemical amplified pos. resist composition and patterning process)
 RN 22417-22-7 CAPLUS
 CN Sulfonium, tris(4-methylphenyl)-, chloride (1:1) (CA INDEX NAME)



IC ICM G03C001-492
 INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

IT 754191-59-8P 866942-43-0P 866942-44-1P
866942-45-2P 866942-46-3P 866942-47-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(chemical amplified pos. resist composition and patterning process)

IT 67-68-5, Dimethyl sulfoxide, reactions 75-77-4, Trimethylsilyl
chloride, reactions 262-20-4, Phenoxthin 696-61-7,
4-Methylphenylmagnesium chloride 945-51-7, Diphenyl sulfoxide
6553-96-4, 2,4,6-Triisopropylbenzenesulfonyl chloride 7722-84-1,
Hydrogen peroxide, reactions 132098-25-0, 4-tert-
Butoxyphenylmagnesium chloride 246864-24-4 686774-01-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(chemical amplified pos. resist composition and patterning process)

IT 22417-22-7P 63877-57-6P, 2,4,6-Triisopropylbenzenesulfonic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(chemical amplified pos. resist composition and patterning process)

L53 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:172248 CAPLUS Full-text

DOCUMENT NUMBER: 136:224211

TITLE: Photoacid generators and photoresists comprising same

INVENTOR(S): Cameron, James F.; Pohlers, Gerhard

PATENT ASSIGNEE(S): Shipley Company, L.L.C., USA

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002019033	A2	20020307	WO 2001-US26438	20010824
WO 2002019033	A3	20031030		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 6664022	B1	20031216	US 2000-648022	20000825
AU 2001086707	A5	20020313	AU 2001-86707	20010824
JP 2004521372	T	20040715	JP 2002-523093	20010824
PRIORITY APPLN. INFO.:			US 2000-648022	A 20000825
			WO 2001-US26438	W 20010824

OTHER SOURCE(S): MARPAT 136:224211

ED Entered STN: 08 Mar 2002

AB New photoacid generator compds. ("PAGs") are provided and photoresist compns. that comprise such compds. In particular, ionic PAGs are provided that include tri-naphthyl sulfonium, thienyl iodonium, thienyl sulfonium, pentafluorophenyl iodonium and pentafluorophenyl sulfonium compds. PAGs of the invention are particularly useful as photoactive components of photoresists imaged at short wavelengths such as sub-300 nm, sub-200 nm and sub-160 nm such as 248 nm, 193 nm and 157 nm.

IT 402571-91-9P 402571-95-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photoacid generators for photoresists composition)

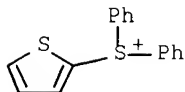
RN 402571-91-9 CAPLUS

CN Sulfonium, diphenyl-2-thienyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 127279-87-2

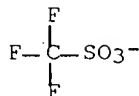
CMF C16 H13 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



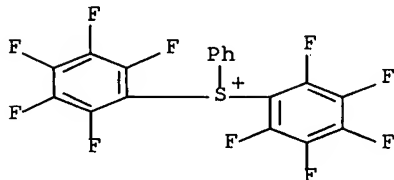
RN 402571-95-3 CAPLUS

CN Sulfonium, bis(pentafluorophenyl)phenyl-, salt with
trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 402571-94-2

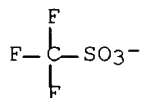
CMF C18 H5 F10 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IT 100-58-3, Phenylmagnesium bromide 879-05-0,
Pentafluorophenylmagnesium bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of photoacid generators for photoresists composition)

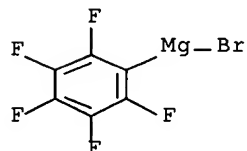
RN 100-58-3 CAPLUS

CN Magnesium, bromophenyl- (CA INDEX NAME)

Ph-Mg-Br

RN 879-05-0 CAPLUS

CN Magnesium, bromo(pentafluorophenyl)- (CA INDEX NAME)

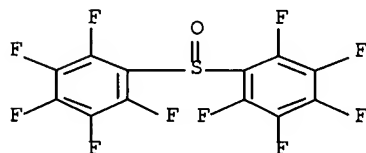


IT 26346-84-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(preparation of photoacid generators for photoresists composition)

RN 26346-84-9 CAPLUS

CN Benzene, 1,2,3,4,5-pentafluoro-6-[(2,3,4,5,6-pentafluorophenyl)sulfinyl]-
(CA INDEX NAME)

IC ICM G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 38

IT 153394-11-7P 353237-81-7P 402571-91-9P 402571-93-1P
402571-95-3PRL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)

(photoacid generators for photoresists composition)

IT 90-14-2, 1-Iodonaphthalene 100-58-3, Phenylmagnesium bromide

879-05-0, Pentafluorophenylmagnesium bromide 1195-14-8

1313-82-2, Sodium sulfide, reactions 1493-13-6, Triflic acid

3988-99-6, Di-(2-Thienyl)sulfide 7719-09-7, Thionyl chloride

14067-34-6, Copperbenzoate 16718-12-0 66003-76-7, Diphenyliodonium
triflate

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of photoacid generators for photoresists composition)

IT 607-53-4P, Di(1-naphthyl)sulfide 26346-84-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(preparation of photoacid generators for photoresists composition)

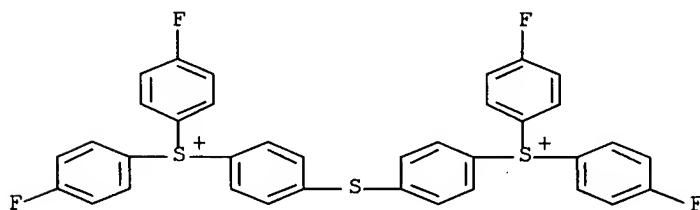
L53 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:692105 CAPLUS Full-text

DOCUMENT NUMBER: 135:249447
 TITLE: Heat-resistant photosensitive resin compositions containing bissulfonium borates, their patterning by microlithography, and electronic parts having the patterns
 INVENTOR(S): Hidaka, Takahiro
 PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

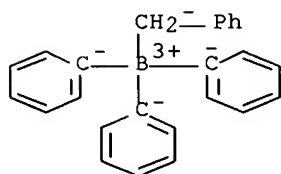
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001255651	A	20010921	JP 2000-71065	20000309
PRIORITY APPLN. INFO.:			JP 2000-71065	20000309

OTHER SOURCE(S): MARPAT 135:249447
 ED Entered STN: 21 Sep 2001
 AB The comps contain heat-resistant resins and bissulfonium borates, preferably those shown as (p-XC₆H₄)₂S⁺-p-C₆H₄-S-p-C₆H₄S⁺(p-C₆H₄X)₂ 2(R₁R₂R₃R₄B-) [X = (substituted) C₁-12 alkyl, H, halogen; R₁-R₄ = C₁-12 alkyl, (substituted) Ph, (substituted) benzyl]. The heat-resistant resins may be polyimide precursors. The comps. are useful for surface protective films, interlayer dielects., etc., for semiconductor devices. The comps. have high sensitivity, give patterns with good features, and are suitable for microlithog. using i-ray steppers.
 IT 360065-67-4P 360772-21-0P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (photopolymn. initiators; heat-resistant photosensitive resin comps. containing bissulfonium borates for microlithog. patterns for semiconductor devices)
 RN 360065-67-4 CAPLUS
 CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-fluorophenyl)-, bis[(T-4)-triphenyl(phenylmethyl)borate(1-)] (9CI) (CA INDEX NAME)
 CM 1
 CRN 106235-10-3
 CMF C36 H24 F4 S3



CM 2
 CRN 98689-32-8
 CMF C25 H22 B

CCI CCS



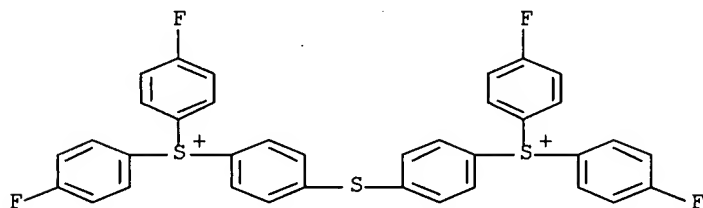
RN 360772-21-0 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-fluorophenyl)-, bis[tetrafluoroborate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106235-10-3

CMF C36 H24 F4 S3

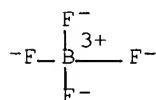


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



IT 395-25-5, 4,4'-Difluorodiphenyl sulfoxide 6921-34-2,

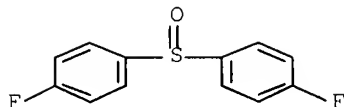
Benzylmagnesium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactants in catalyst preparation; heat-resistant photosensitive resin compns. containing bissulfonium borates for microlithog. patterns for semiconductor devices)

RN 395-25-5 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)



RN 6921-34-2 CAPLUS
 CN Magnesium, chloro(phenylmethyl)- (CA INDEX NAME)

Ph-CH₂-Mg-Cl

IC ICM G03F007-029
 ICS C08F002-48; C08F290-06; C08J005-18; C08K005-548; C08L079-08;
 C08L101-00; G03F007-027; G03F007-037; H01L021-027; H05K003-46
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 39
 IT 360065-67-4P 360772-21-0P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (photopolymn. initiators; heat-resistant photosensitive resin compns.
 containing bissulfonium borates for microlithog. patterns for semiconductor
 devices)
 IT 109-63-7 139-66-2, Diphenyl sulfide 395-25-5,
 4,4'-Difluorodiphenyl sulfoxide 6921-34-2, Benzylmagnesium
 chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactants in catalyst preparation; heat-resistant photosensitive resin
 compns. containing bissulfonium borates for microlithog. patterns for
 semiconductor devices)

L53 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:692104 CAPLUS Full-text

DOCUMENT NUMBER: 135:249458

TITLE: Photosensitive resin compositions, their
 photosensitive elements, and fabrication of resist
 patterns and printed circuit boards

INVENTOR(S): Natori, Michiko; Hidaka, Takahiro

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

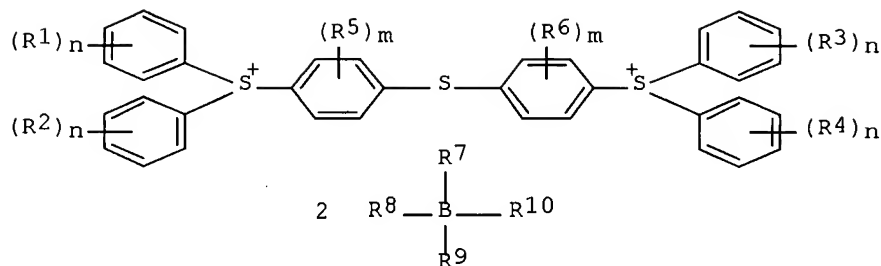
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001255650	A	20010921	JP 2000-71064	20000309
PRIORITY APPLN. INFO.:			JP 2000-71064	20000309
OTHER SOURCE(S):	MARPAT	135:249458		
ED Entered STN:	21 Sep	2001		
GI				



I

AB The compns. contain (A) binder polymers, (B) photopolymerizable compds. bearing ≥ 1 polymerizable ethylenically unsatd. groups, and (C) bisulfonium borates shown as I (R1-R4 = halogen, C1-12 alkyl, C1-12 alkoxy, C6-14 aryl; R5, R6 = C1-12 alkyl, C1-12 alkoxy, R7-R10 = C1-12 alkyl, C6-14 aryl, C7-11 aryalkyl; $n = 0.5$, $n = 0.4$). The compns. may contain 2,4,5-triarylimidazole dimer and coumarines and/or aromatic ketones. The compns. have excellent sensitivity, high resolution, adhesion, developability, and suppressed staining of plating bath. The compns. are applied on substrates then dried to give the photosensitive elements, which are laminated on circuit board substrates with the photosensitive layers being in tight contact with the substrates, imagewise exposed to actinic light to cure exposed regions, and developed to remove unexposed regions. The circuit board substrates with the thus fabricated resist patterns are then etched or plated to give printed circuit boards.

IT 360065-67-4P 360565-06-6P

RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(neg. photoresists containing bisulfonium borates for manufacture of printed

circuit boards)

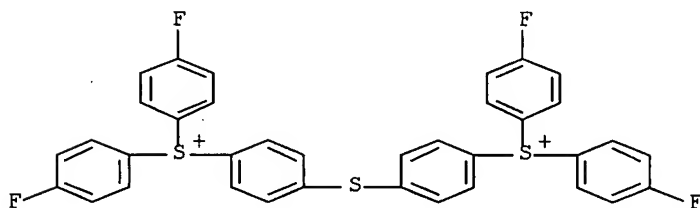
RN 360065-67-4 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-fluorophenyl)-, bis[(T-4)-triphenyl(phenylmethyl)borate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106235-10-3

CMF C36 H24 F4 S3

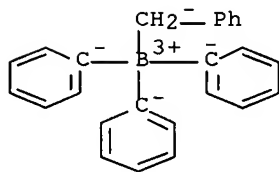


CM 2

CRN 98689-32-8

CMF C25 H22 B

CCI CCS



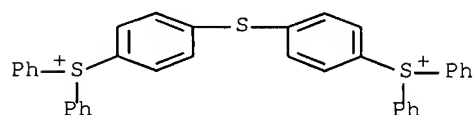
RN 360565-06-6 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, bis[tetraphenylborate(1-)]
(9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

CMF C36 H28 S3

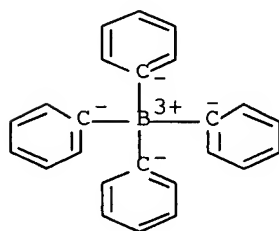


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS

IT 395-25-5, 4,4'-Difluorodiphenyl sulfoxide 6921-34-2,
Benzylmagnesium chloride

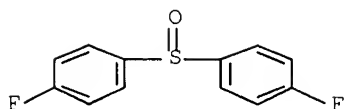
RL: RCT (Reactant); RACT (Reactant or reagent)

(reactants for borate preparation; neg. photoresists containing
bissulfonium

borates for manufacture of printed circuit boards)

RN 395-25-5 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)



RN 6921-34-2 CAPLUS
 CN Magnesium, chloro(phenylmethyl)- (CA INDEX NAME)

Ph-CH₂-Mg-Cl

IC ICM G03F007-029
 ICS C08F002-44; C08F002-50; C08F020-10; C08F291-00; C08F299-02;
 G03F007-004; G03F007-027; G03F007-031; G03F007-032; G03F007-40;
 H05K003-06; H05K003-18
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 38, 76
 IT 360065-67-4P 360565-06-6P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP
 (Preparation); USES (Uses)
 (neg. photoresists containing bissulfonium borates for manufacture of
 printed circuit boards)
 IT 109-63-7 139-66-2, Diphenyl sulfide 395-25-5,
 4,4'-Difluorodiphenyl sulfoxide 591-51-5, Phenyllithium
 6921-34-2, Benzylmagnesium chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactants for borate preparation; neg. photoresists containing
 bissulfonium borates for manufacture of printed circuit boards)

L53 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2001:680834 CAPLUS Full-text
 DOCUMENT NUMBER: 135:249454
 TITLE: Bis(sulfonium) borate compounds for
 photopolymerization catalysts in dry-film resists and
 their preparation
 INVENTOR(S): Hidaka, Takahiro; Natori, Michiko; Tachikawa,
 Hiroyuki; Murai, Toshihiko
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan; Asahi Denka Kogyo
 K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001253869	A	20010918	JP 2000-71063	20000309
PRIORITY APPLN. INFO.:			JP 2000-71063	20000309
OTHER SOURCE(S):	MARPAT	135:249454		

ED Entered STN: 18 Sep 2001

AB The compds. are represented by A2S+LSLS+A2.2(R1R2R3R4B-). [A = (un)substituted Ph; L = (un)substituted 1,4-phenylene; R1-4 = C1-12 alkyl, C6-14 aryl, C7-11 arylalkyl; n = 0-5 integer; m = 0-4 integer] and are prepared by acid-catalyzed reaction of di-Ph sulfoxide derivs. with diphenylsulfide derivs. and then with alkali metal borates. Dry-film photoresists containing the compds. as catalysts inhibit staining of plating baths in semiconductor fabrication process.

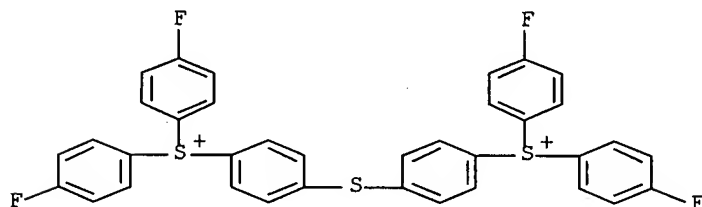
IT 360061-07-0P 360065-67-4P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (manufacture of bis(sulfonium) borate compds. for photopolymn. catalysts in dry-film photoresists)

RN 360061-07-0 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-fluorophenyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

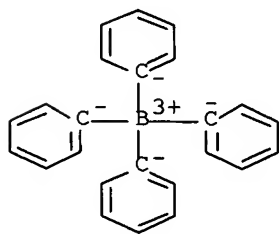
CM 1

CRN 106235-10-3
 CMF C36 H24 F4 S3



CM 2

CRN 4358-26-3
 CMF C24 H20 B
 CCI CCS



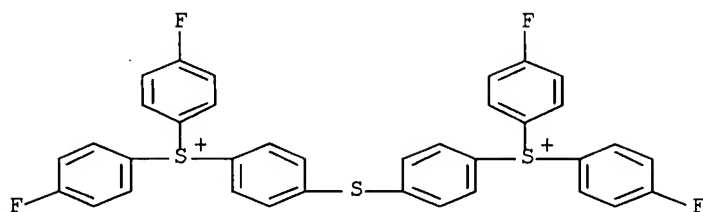
RN 360065-67-4 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-fluorophenyl)-, bis[(T-4)-triphenyl(phenylmethyl)borate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106235-10-3

CMF C36 H24 F4 S3

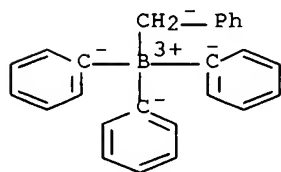


CM 2

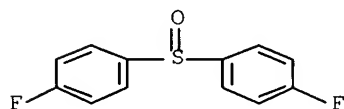
CRN 98689-32-8

CMF C25 H22 B

CCI CCS



IT 395-25-5, 4,4'-Difluorodiphenylsulfoxide 6921-34-2,
Benzylmagnesium chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of bis(sulfonium) borate compds. for photopolymn. catalysts in
dry-film photoresists)
RN 395-25-5 CAPLUS
CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)]



RN 6921-34-2 CAPLUS
CN Magnesium, chloro(phenylmethyl)- (CA INDEX NAME)

Ph-CH₂-Mg-Cl

IC ICM C07C381-12
ICS C07F005-02; C08F002-48; G03F007-029; C07B061-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 35, 67, 76

IT 360061-07-0P 360065-67-4P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (manufacture of bis(sulfonium) borate compds. for photopolymn. catalysts in dry-film photoresists)

IT 109-63-7, Diethyl ether trifluoroboron 139-66-2, Diphenyl sulfide 143-66-8, Sodium tetraphenylborate 395-25-5, 4,4'-Difluorodiphenylsulfoxide 591-51-5, Phenyllithium 6921-34-2, Benzylmagnesium chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacture of bis(sulfonium) borate compds. for photopolymn. catalysts in dry-film photoresists)

L53 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:117258 CAPLUS Full-text
 DOCUMENT NUMBER: 132:173395
 TITLE: Radiation-sensitive composition for chemically amplified photoresist
 INVENTOR(S): Pawlowski, Georg; Okazaki, Hiroshi; Kinoshita, Yoshiaki; Tsugama, Naoko; Hishida, Aritaka; Ma, Xiao-ming; Yamaguchi, Yuko
 PATENT ASSIGNEE(S): Clariant International Ltd., Switz.
 SOURCE: PCT Int. Appl., 133 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008525	A1	20000217	WO 1999-JP4304	19990809
W: CN, JP, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
TW 250379	B	20060301	TW 1999-88113373	19990805
EP 1033624	A1	20000906	EP 1999-935116	19990809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6358665	B1	20020319	US 2000-529371	20000703
PRIORITY APPLN. INFO.:			JP 1998-225029	A 19980807
			JP 1999-87036	A 19990329
			WO 1999-JP4304	W 19990809

ED Entered STN: 18 Feb 2000

AB A chemical amplification-type radiation-sensitive composition comprising a film-forming resin based on a hydroxystyrene in combination with an onium salt precursor capable of generating a fluorinated alkanesulfonic acid as a radiation-sensitive acid-generating agent. This composition is free from the occurrence of corrosion of an apparatus owing to outgassing, the formation of a T-type pattern and the change of line width caused by a delay of processing time, and can be used for achieving a high sensitivity and resolving power and a good and stable pattern formation.

IT 258871-80-6P, Tris(4-hydroxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (radiation-sensitive composition for chemical amplified photoresist)

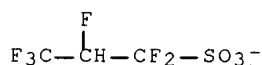
RN 258871-80-6 CAPLUS

CN Sulfonium, tris(4-hydroxyphenyl)-, salt with 1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 172870-67-6

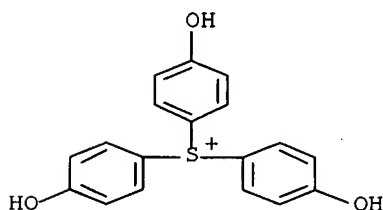
CMF C3 H F6 O3 S



CM 2

CRN 88101-75-1

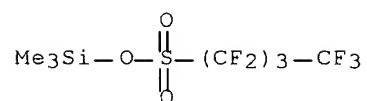
CMF C18 H15 O3 S



IT 68734-62-3P, Trimethylsilylnonafluorobutanesulfonate
 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate
 175610-67-0P 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium nonafluorobutanesulfonate 258871-76-0P,
 Tris(4-tert-butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate
 258871-78-2P, Tri(4-t-butoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-99-7P, Tris(tert-butylcarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-05-8P, Diphenyl 4-tert-butylphenylsulfonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (radiation-sensitive composition for chemical amplified photoresist)

RN 68734-62-3 CAPLUS

CN 1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, trimethylsilyl ester (9CI) (CA INDEX NAME)



RN 144317-44-2 CAPLUS
 CN Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate
 (1:1) (CA INDEX NAME)

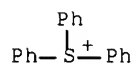
CM 1

CRN 45187-15-3
 CMF C4 F9 O3 S



CM 2

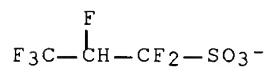
CRN 18393-55-0
 CMF C18 H15 S



RN 175610-67-0 CAPLUS
 CN Sulfonium, triphenyl-, 1,1,2,3,3,3-hexafluoro-1-propanesulfonate (1:1)
 (CA INDEX NAME)

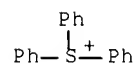
CM 1

CRN 172870-67-6
 CMF C3 H F6 O3 S



CM 2

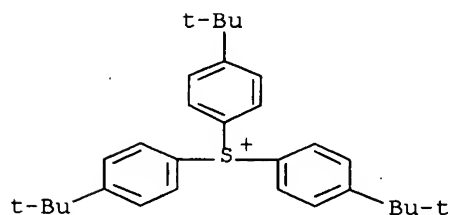
CRN 18393-55-0
 CMF C18 H15 S



RN 241806-75-7 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1) (CA INDEX NAME)

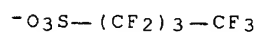
CM 1

CRN 91815-56-4
 CMF C30 H39 S



CM 2

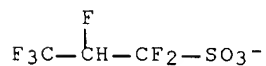
CRN 45187-15-3
 CMF C4 F9 O3 S



RN 258871-76-0 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, salt with 1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

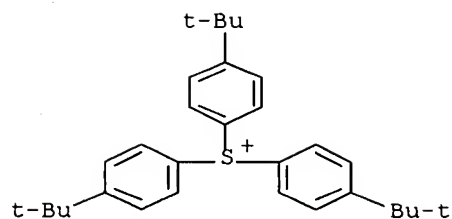
CM 1

CRN 172870-67-6
 CMF C3 H F6 O3 S



CM 2

CRN 91815-56-4
 CMF C30 H39 S



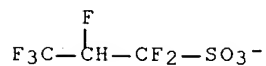
RN 258871-78-2 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with
1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 172870-67-6

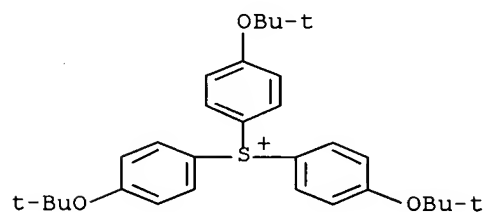
CMF C3 H F6 O3 S



CM 2

CRN 137455-55-1

CMF C30 H39 O3 S



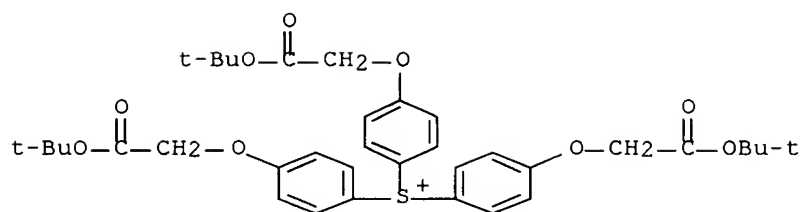
RN 258871-81-7 CAPLUS

CN Sulfonium, tris[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with
1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 180801-62-1

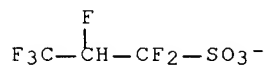
CMF C36 H45 O9 S



CM 2

CRN 172870-67-6

CMF C3 H F6 O3 S



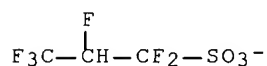
RN 258871-86-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with
1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 172870-67-6

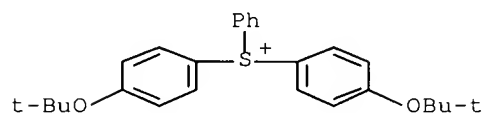
CMF C3 H F6 O3 S



CM 2

CRN 160659-38-1

CMF C26 H31 O2 S



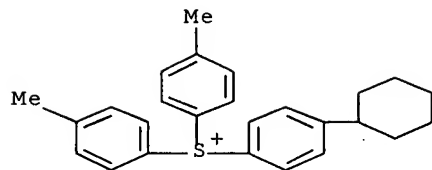
RN 258871-88-4 CAPLUS

CN Sulfonium, (4-cyclohexylphenyl)bis(4-methylphenyl)-, salt with
1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 258871-87-3

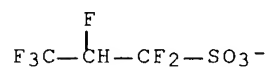
CMF C26 H29 S



CM 2

CRN 172870-67-6

CMF C3 H F6 O3 S



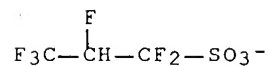
RN 258871-89-5 CAPLUS

CN Sulfonium, tris(4-chlorophenyl)-, salt with 1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 172870-67-6

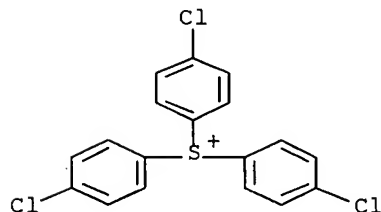
CMF C3 H F6 O3 S



CM 2

CRN 125853-07-8

CMF C18 H12 Cl3 S



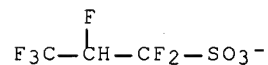
RN 258871-90-8 CAPLUS

CN Sulfonium, (4-hydroxy-3,5-dimethylphenyl)diphenyl-, salt with 1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 172870-67-6

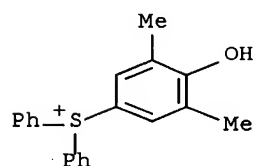
CMF C3 H F6 O3 S



CM 2

CRN 127279-85-0

CMF C20 H19 O S



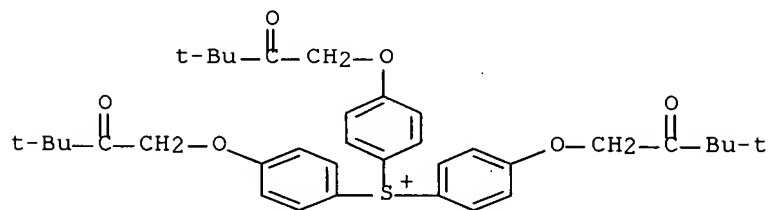
RN 258871-99-7 CAPLUS

CN Sulfonium, tris[4-(3,3-dimethyl-2-oxobutoxy)phenyl]-, salt with
1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 258871-98-6

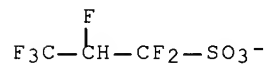
CMF C36 H45 O6 S



CM 2

CRN 172870-67-6

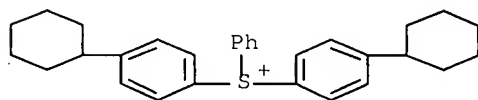
CMF C3 H F6 O3 S



RN 258872-01-4 CAPLUS
 CN Sulfonium, bis(4-cyclohexylphenyl)phenyl-, salt with 1,1,2,3,3,3-hexafluoro-1-propanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

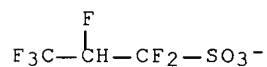
CM 1

CRN 258872-00-3
 CMF C30 H35 S



CM 2

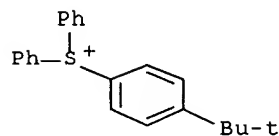
CRN 172870-67-6
 CMF C3 H F6 O3 S



RN 258872-05-8 CAPLUS
 CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]diphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1) (CA INDEX NAME)

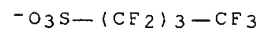
CM 1

CRN 66482-54-0
 CMF C22 H23 S



CM 2

CRN 45187-15-3
 CMF C4 F9 O3 S



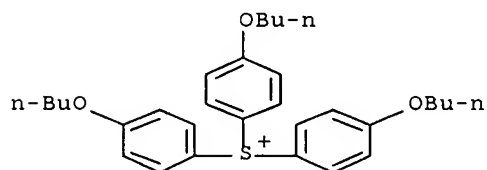
RN 258872-08-1 CAPLUS

CN Sulfonium, tris(4-butoxyphenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 258872-07-0

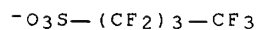
CMF C30 H39 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



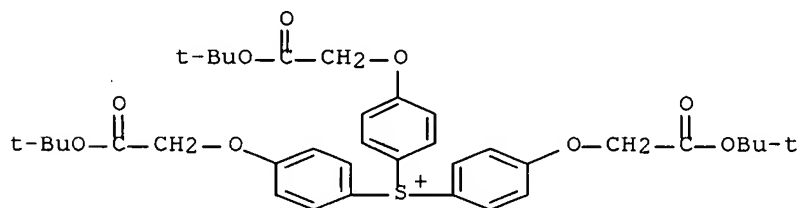
RN 258872-10-5 CAPLUS

CN Sulfonium, tris[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 180801-62-1

CMF C36 H45 O9 S



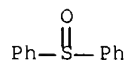
CM 2

CRN 45187-15-3

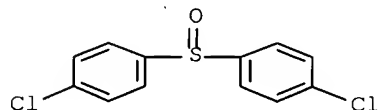
CMF C4 F9 O3 S



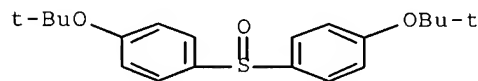
IT 945-51-7, Diphenylsulfoxide 3085-42-5,
 4,4'-Dichlorophenyl sulfoxide 170632-59-4, Bis(4-tert-
 butoxyphenyl)sulfoxide 263871-53-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (radiation-sensitive composition for chemical amplified photoresist)
 RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



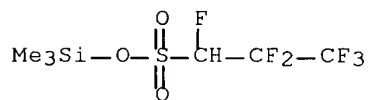
RN 3085-42-5 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-chloro- (9CI) (CA INDEX NAME)



RN 170632-59-4 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



RN 263871-53-0 CAPLUS
 CN 1-Propanesulfonic acid, 1,2,2,3,3,3-hexafluoro-, trimethylsilyl ester
 (9CI) (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03F007-039; G03F007-038; C07C381-12; C07C309-06
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 IT 258871-80-6P, Tris(4-hydroxyphenyl)sulfonium 3,3,3,2,1,1-
 hexafluoropropanesulfonate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (radiation-sensitive composition for chemical amplified photoresist)
 IT 76-05-1P, preparation 108-90-7P, Chlorobenzene, preparation

109-92-2DP, Ethylvinyl ether, reaction product with functionalized styrene polymer 110-75-8DP, 2-Chloroethylvinyl ether, reaction product with 4-hydroxystyrene homopolymer 536-80-1P, Iodosylbenzene 827-52-1P, Cyclohexylbenzene 2628-17-3P 5292-43-3DP, tert-Butylbromoacetate, reaction product with hydrolyzed 4-tert-Bu polymer 7758-05-6P, Potassium iodate 12124-97-9P, Ammonium bromide 18995-35-2P 24979-70-2DP, 4-Hydroxystyrene homopolymer, reaction product with functionalized vinyl compound 34619-03-9DP, Di-tert-butylcarbonate, reaction product with 4-hydroxystyrene homopolymer 68734-62-3P, Trimethylsilylnonafluorobutanesulfonate 94287-61-3P 129361-29-1P 130100-38-8P 133685-94-6P 135648-85-0P, 4-Hydroxystyrene-4-methoxystyrene copolymer 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate 155040-27-0P, 4-Hydroxystyrene-tert-butyl methacrylate copolymer 158401-89-9P 174476-25-6DP, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer, hydrolyzed, reaction products with Et vinyl ether 175610-67-0P 176747-00-5P, Diphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 204065-67-8DP, 4-Hydroxystyrene-4-methylstyrene copolymer, reaction product with ethoxy vinyl ether 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium nonafluorobutanesulfonate 258871-76-0P, Tris(4-tert-butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-78-2P, Tri(4-tert-butoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-83-9P, β -Oxocyclohexyl 2-norbornylmethyl sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-84-0P, Bis(4-cyclohexylphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-85-1P, 4-Methylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-91-9P, Di(4-tert-butoxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-94-2P, Di(4-tert-butylcarbonyloxymethoxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-95-3P, 4-tert-Butylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-97-5P, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene- α,ω -triethyleneglycol divinyl ether copolymer 258871-99-7P, Tris(tert-butylcarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-02-5P, 4-Hydroxystyrene-4-tert-butyloxycarbonyloxystyrene-tert-butyl methacrylate copolymer 258872-05-8P, Diphenyl 4-tert-butylphenylsulfonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-13-8P 258872-14-9P, Bis(4-cyclohexylphenyl)iodonium nonafluorobutylsulfonate 258872-15-0DP, 4-Acetoxystyrene-styrene-tert-butyl methacrylate copolymer, reaction products with hydroxystyrene polymer derivative 258873-04-0P, Bis(4-hydroxyphenyliodonium) 3,3,3,2,1,1-hexafluoropropanesulfonate

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(radiation-sensitive composition for chemical amplified photoresist)

IT 67-68-5, Dimethyl sulfoxide, reactions 71-43-2, Benzene, reactions

75-75-2, Methanesulfonic acid 107-59-5, tert-Butyl chloroacetate
 357-31-3 375-73-5 507-19-7, tert-Butyl bromide 591-50-4, Iodobenzene
 945-51-7, Diphenylsulfoxide 3085-42-5,
 4,4'-Dichlorophenyl sulfoxide 5292-43-3, tert-Butylbromoacetate
 29342-65-2, 2-Bromonorbornane 137455-55-1, Tris(4-tert-
 butoxyphenyl)sulfonium 170632-59-4, Bis(4-tert-
 butoxyphenyl)sulfoxide 258872-06-9, Diphenyl 4-tert-butylphenylsulfonium
 bromide 258872-11-6, Tris-4(tert-butoxyphenyl)sulfonium
 nonafluorobutanesulfonate 263871-53-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(radiation-sensitive composition for chemical amplified photoresist)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:274596 CAPLUS Full-text

DOCUMENT NUMBER: 132:315852

TITLE: Photoresist compositions with improved shelf life,
 formation of relief images using them, and products
 obtained from them

INVENTOR(S): Cameron, James F.; Mori, James Michael; Allsra, George
 W.; Xu, Guangyu; Yamamoto, Yoshihiro

PATENT ASSIGNEE(S): Shipley L.L.C. Company, USA

SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000122296	A	20000428	JP 1999-252064	19990804
KR 2000016920	A	20000325	KR 1999-27827	19990709
			US 1998-129113	A 19980804

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 132:315852

ED Entered STN: 28 Apr 2000

AB The compns. contain (A) components containing releasing groups by light and acids, (B) sulfonium photoacid generators substituted by (un)substituted alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, and/or heteroalkynyl groups, and (C) OH-free solvents. In the compns. B may be sulfonium arylsulfonates, alicyclic sulfonates, or aliphatic sulfonates or triarylsulfonium sulfonates. Relief images are obtained by forming layers of the compns., irradiating with light, and developing. The products contain substrates coated with the compns. The compns. show high storage stability and good lithog. characteristics.

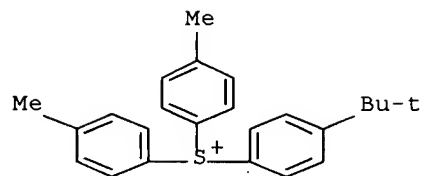
IT 265668-99-3P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(sulfonium photoacid generator-containing photoresists with improved shelf life for formation of relief images)

RN 265668-99-3 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]bis(4-methylphenyl)-, bromide (9CI) (CA INDEX NAME)



IT 265668-97-1P 265669-01-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (sulfonium photoacid generator-containing photoresists with improved shelf life for formation of relief images)

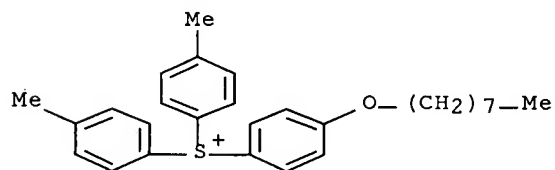
RN 265668-97-1 CAPLUS

CN Sulfonium, bis(4-methylphenyl)[4-(octyloxy)phenyl]-, salt with (1S,4R)-7,7-dimethyl-2-oxobicyclo[2.2.1]heptane-1-methanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 265668-96-0

CMF C28 H35 O S

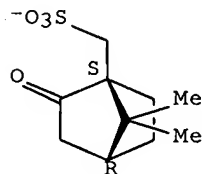


CM 2

CRN 46362-90-7

CMF C10 H15 O4 S

Absolute stereochemistry.



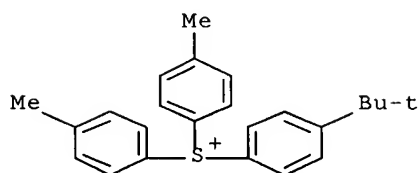
RN 265669-01-0 CAPLUS

CN Sulfonium, [4-(1,1-dimethylethyl)phenyl]bis(4-methylphenyl)-, salt with pentafluorobenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 265669-00-9

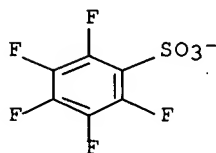
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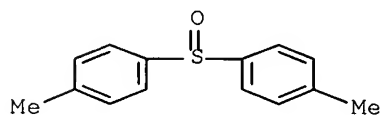
CM 2

CRN 46377-88-2

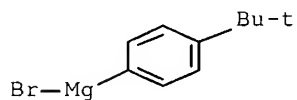
CMF C6 F5 O3 S



IT 1774-35-2, p-Tolyl sulfoxide 63488-10-8,
 4-tert-Butylphenylmagnesium bromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sulfonium photoacid generator-containing photoresists with improved shelf
 life for formation of relief images)
 RN 1774-35-2 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-methyl- (CA INDEX NAME)]



RN 63488-10-8 CAPLUS
 CN Magnesium, bromo[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)



IC ICM G03F007-039
 ICS G03F007-004; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other

- Reprographic Processes)
 IT 265668-99-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (sulfonium photoacid generator-containing photoresists with improved shelf life for formation of relief images)
 IT 265668-97-1P 265669-01-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (sulfonium photoacid generator-containing photoresists with improved shelf life for formation of relief images)
 IT 313-50-8, Pentafluorobenzenesulfonic acid 1774-35-2, p-Tolyl sulfoxide 1818-07-1, Octyl phenyl ether 14888-09-6, Ammonium camphorsulfonate 63488-10-8, 4-tert-Butylphenylmagnesium bromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sulfonium photoacid generator-containing photoresists with improved shelf life for formation of relief images)

L53 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:795459 CAPLUS Full-text

DOCUMENT NUMBER: 130:102885

TITLE: Sulfonium salt and chemically amplified positive-working photoresist material containing the same

INVENTOR(S): Nagata, Takashi; Nagura, Shigehiro; Ishihara, Toshinobu

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.

CODEN: JKXXAF

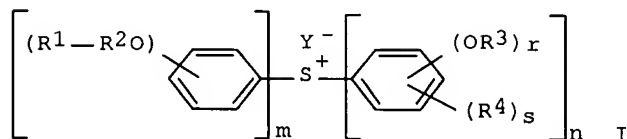
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10330353	A	19981215	JP 1997-136594	19970527
JP 3798115	B2	20060719		
PRIORITY APPLN. INFO.:			JP 1997-136594	19970527
OTHER SOURCE(S):			MARPAT 130:102885	
ED Entered STN: 21 Dec 1998				
GI				



- AB The photoresist material contains a sulfonium salt I [R1 = (substituted) anthracene, phenanthrene, phenothiazine, and perylene group; R2 = divalent (substituted) (hetero atom-containing) alkyl; R4 = linear, branched, or cyclic alkyl, alkoxy, alkoxyalkyl, alkenyl, or aryl; OR3 = acid-unstable group; m =

1-3; n = 0-3; m + n = 3; r, s = 0-5; (r + s) ≤ 5; Y- = C2-20 linear, branched, or cyclic alkyl or arylsulfonic anion]. The photoresist shows high sensitivity for KrF excimer laser and high resolution and is formable a fine pattern by developing with an alkaline aqueous solution. The obtained pattern has improved heat and plasma etching resistance.

IT 219475-46-4P 219475-48-6P 219475-51-1P
 219475-55-5P 219475-59-9P 219475-63-5P
 219475-67-9P 219475-70-4P 219475-73-7P
 219475-76-0P 219475-79-3P 219475-82-8P
 219475-85-1P 219475-88-4P 219475-91-9P
 219475-94-2P 219475-97-5P 219476-00-3P
 219476-03-6P 219476-06-9P 219476-09-2P
 219476-11-6P 219476-13-8P 219476-15-0P
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 219476-19-4P 219476-20-7P 219476-21-8P
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 219476-25-2P 219476-26-3P 219476-27-4P
 219476-28-5P 219476-29-6P 219476-30-9P
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 219476-43-4P 219476-44-5P 219476-45-6P
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 219476-68-3P 219476-69-4P 219476-70-7P
 219476-71-8P 219476-72-9P 219476-73-0P
 219476-74-1P

RL: PNU (Preparation, unclassified); PREP (Preparation)
 (chemical amplified pos.-working photoresist containing sulfonium salt)

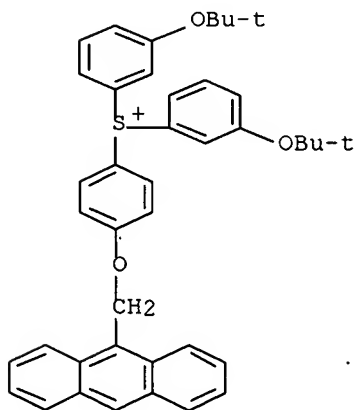
RN 219475-46-4 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1)
 (9CI) (CA INDEX NAME)

CM 1

CRN 219475-45-3

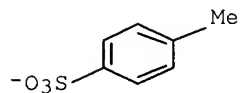
CMF C41 H41 O3 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



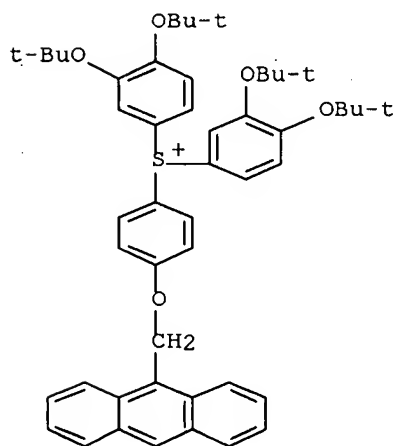
RN 219475-48-6 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-47-5

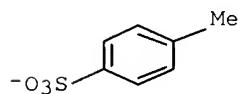
CMF C49 H57 O5 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



RN 219475-51-1 CAPLUS

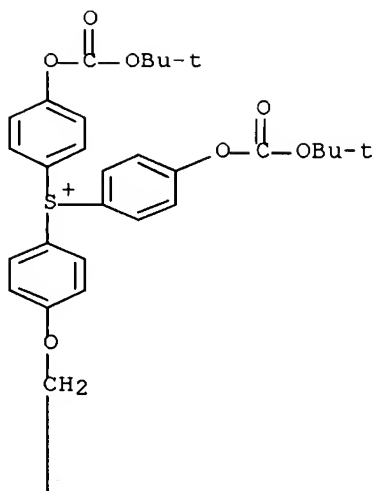
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

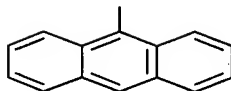
CRN 219475-50-0

CMF C43 H41 O7 S

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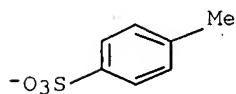
PAGE 2-A



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



RN 219475-55-5 CAPLUS

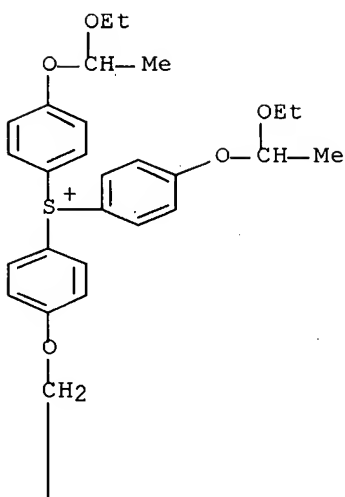
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1-ethoxyethoxy)phenyl]-,
salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

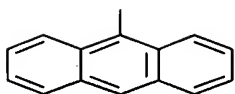
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CMF C41 H41 O5 S

PAGE 1-A



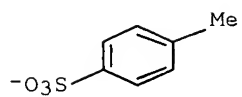
PAGE 2-A



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



RN 219475-59-9 CAPLUS

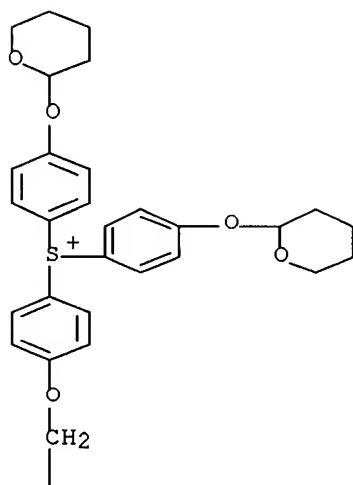
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

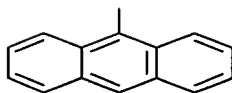
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CMF C43 H41 O5 S

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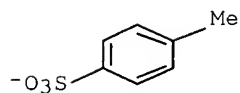


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CM 2

CRN 16722-51-3
 CMF C7 H7 O3 S

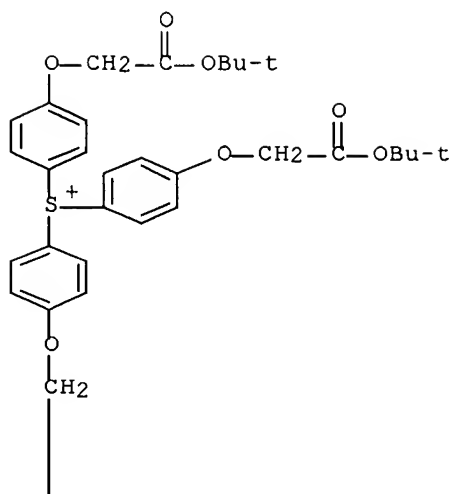


RN 219475-63-5 CAPLUS
 CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI)
 (CA INDEX NAME)

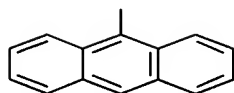
CM 1

CRN 219475-62-4
 CMF C45 H45 O7 S

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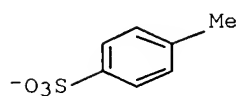
PAGE 2-A



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



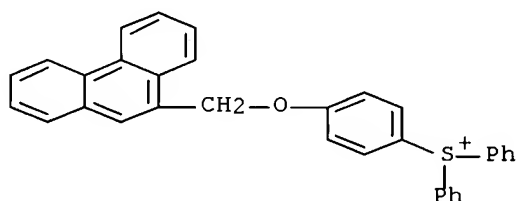
RN 219475-67-9 CAPLUS

CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-66-8

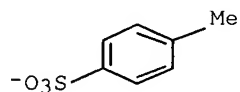
CMF C33 H25 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



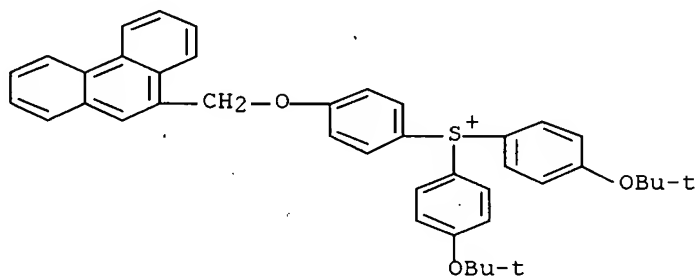
RN 219475-70-4 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-69-1

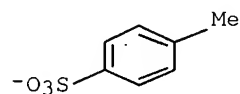
CMF C41 H41 O3 S



CM 2

CRN 16722-51-3

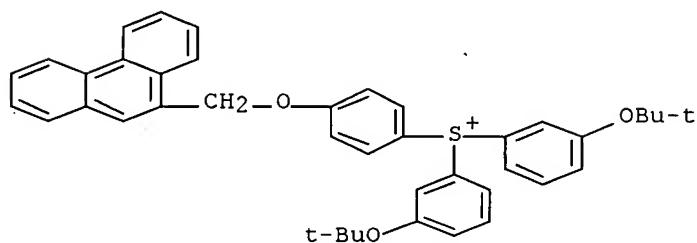
CMF C7 H7 O3 S



RN 219475-73-7 CAPLUS
 CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

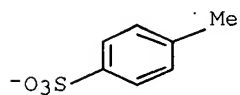
CM 1

CRN 219475-72-6
 CMF C41 H41 O3 S



CM 2

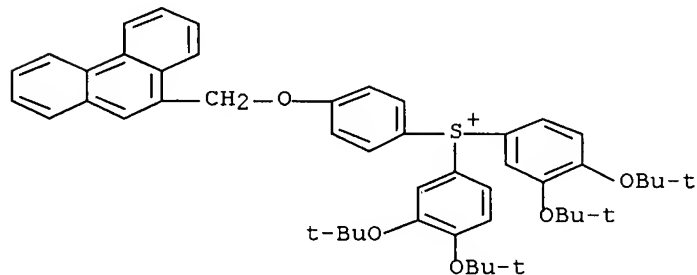
CRN 16722-51-3
 CMF C7 H7 O3 S



RN 219475-76-0 CAPLUS
 CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

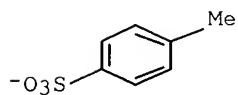
CRN 219475-75-9
 CMF C49 H57 O5 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



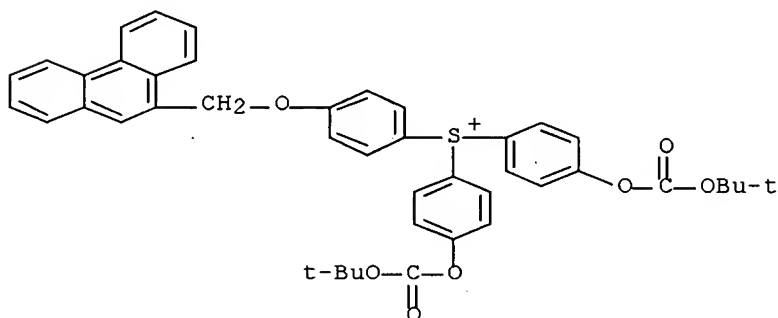
RN 219475-79-3 CAPLUS

CN Sulfonium, bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-78-2

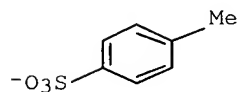
CMF C43 H41 O7 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



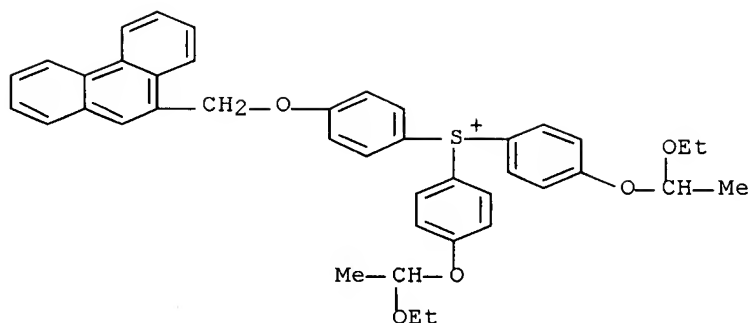
RN 219475-82-8 CAPLUS

CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-81-7

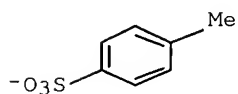
CMF C41 H41 O5 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



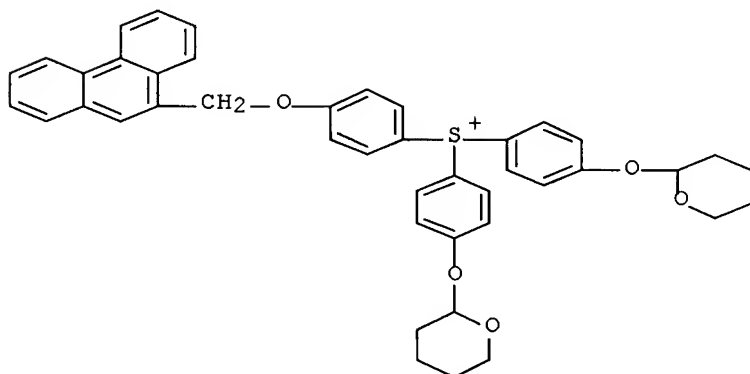
RN 219475-85-1 CAPLUS

CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

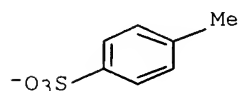
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CMF C43 H41 O5 S



CM 2

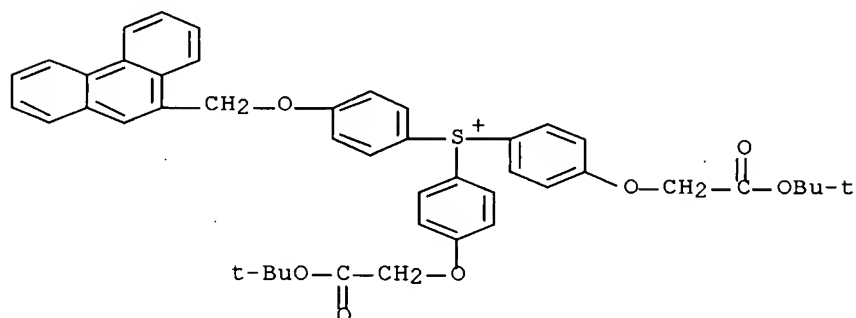
CRN 16722-51-3
CMF C7 H7 O3 S



RN 219475-88-4 CAPLUS
CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

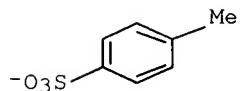
CM 1

CRN 219475-87-3
CMF C45 H45 O7 S



CM 2

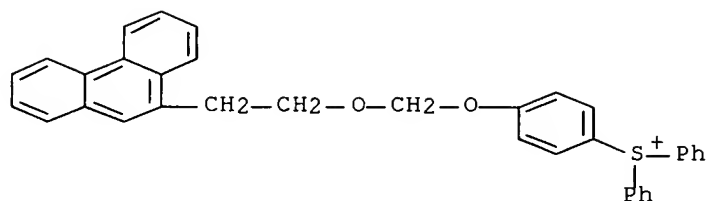
CRN 16722-51-3
CMF C7 H7 O3 S



RN 219475-91-9 CAPLUS
CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

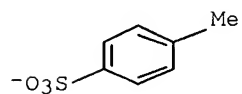
CRN 219475-90-8
CMF C35 H29 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



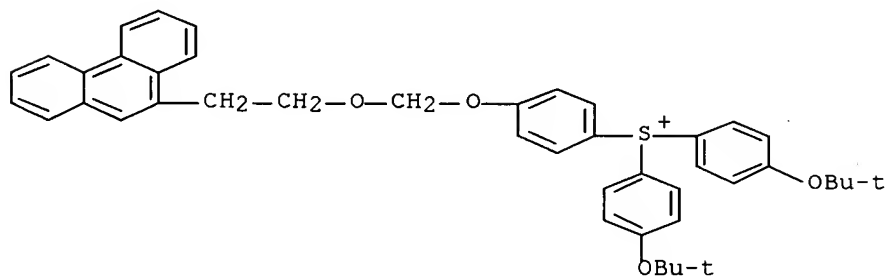
RN 219475-94-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-93-1

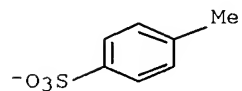
CMF C43 H45 O4 S



CM 2

CRN 16722-51-3

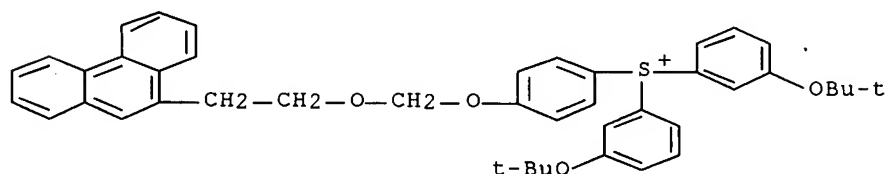
CMF C7 H7 O3 S



RN 219475-97-5 CAPLUS
 CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

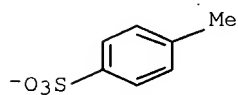
CM 1

CRN 219475-96-4
 CMF C43 H45 O4 S



CM 2

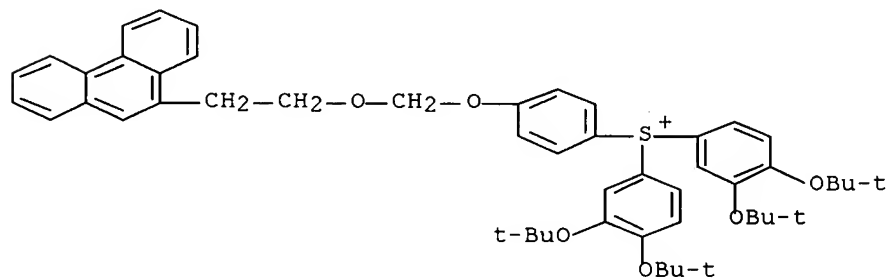
CRN 16722-51-3
 CMF C7 H7 O3 S



RN 219476-00-3 CAPLUS
 CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

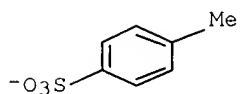
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CM 2

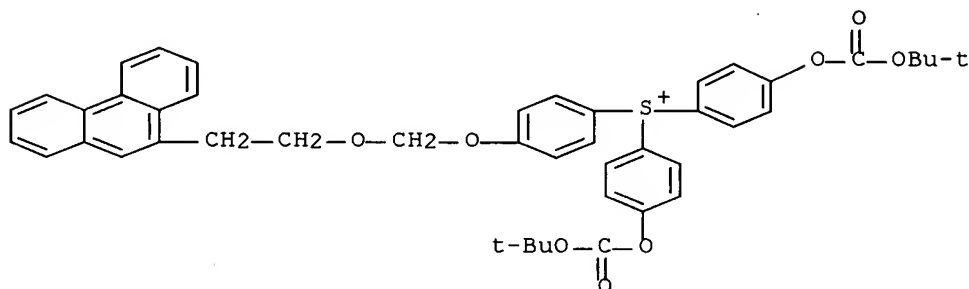
CRN 16722-51-3
CMF C7 H7 O3 S



RN 219476-03-6 CAPLUS
CN Sulfonium, bis[4-[[[1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

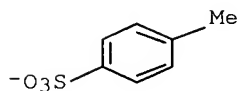
CM 1

CRN 219476-02-5
CMF C45 H45 O8 S



CM 2

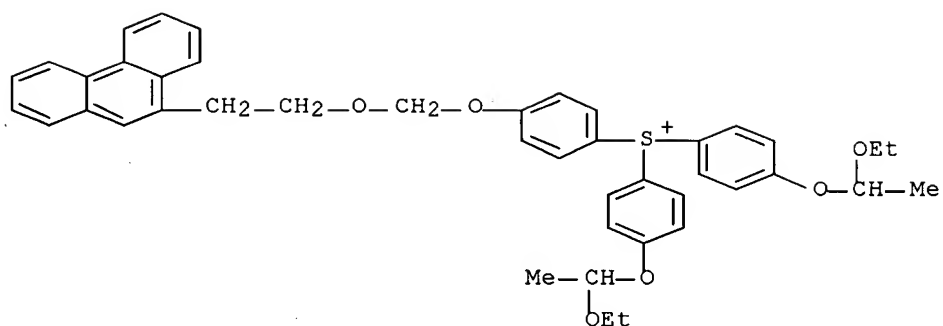
CRN 16722-51-3
CMF C7 H7 O3 S



RN 219476-06-9 CAPLUS
CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

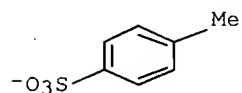
CRN 219476-05-8
CMF C43 H45 O6 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



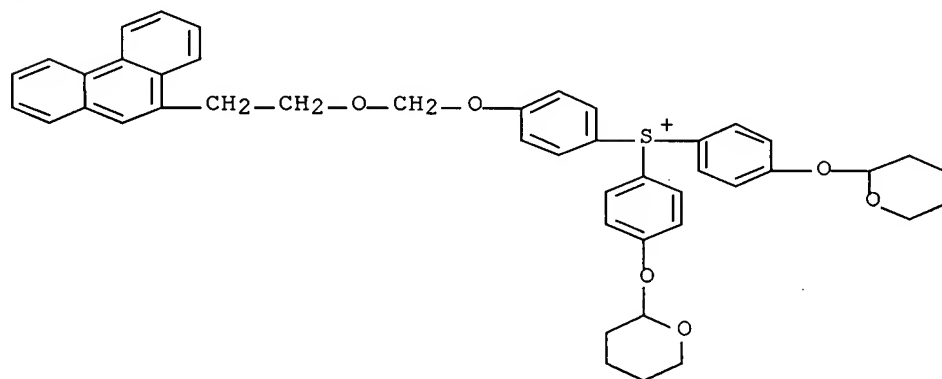
RN 219476-09-2 CAPLUS

CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]bis[4-
 [(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 4-methylbenzenesulfonic
 acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-08-1

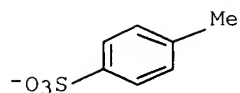
CMF C45 H45 O6 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



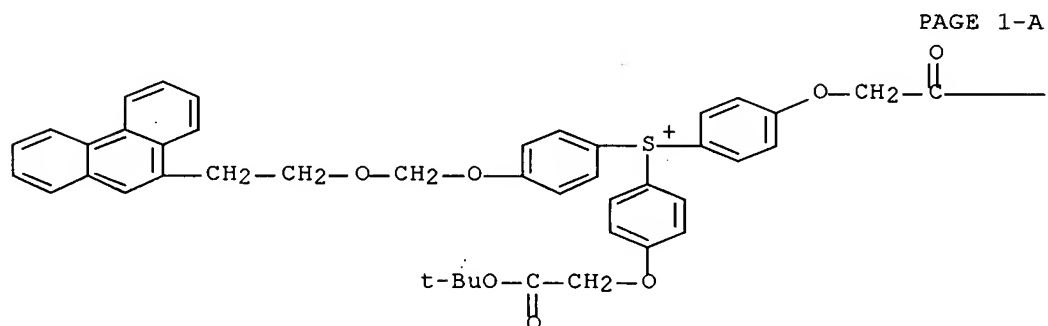
RN 219476-11-6 CAPLUS

CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-10-5

CMF C47 H49 O8 S



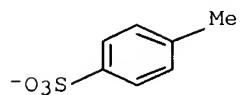
PAGE 1-B

—OBu-t

CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

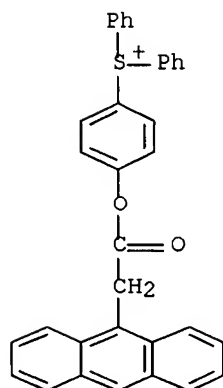


RN 219476-13-8 CAPLUS

CN Sulfonium, [4-[(9-anthracenylacetyl)oxy]phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

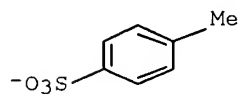
CM 1

CRN 219476-12-7
CMF C34 H25 O2 S



CM 2

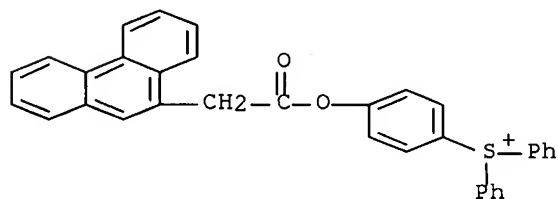
CRN 16722-51-3
CMF C7 H7 O3 S



RN 219476-15-0 CAPLUS
CN Sulfonium, [4-[(9-phenanthrenylacetyl)oxy]phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

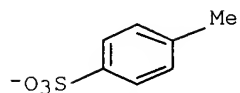
CRN 219476-14-9
CMF C34 H25 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



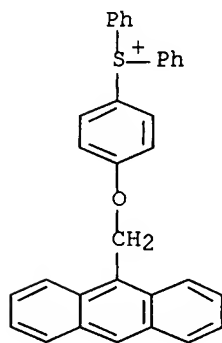
RN 219476-16-1 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-39-5

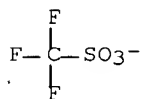
CMF C33 H25 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



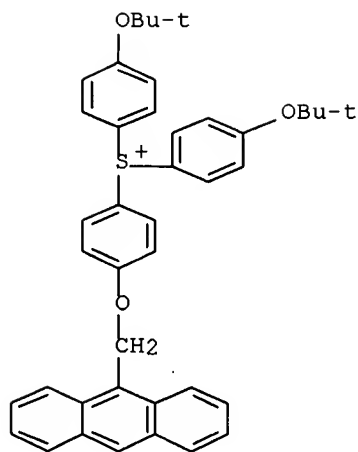
RN 219476-17-2 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-43-1

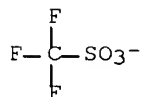
CMF C41 H41 O3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



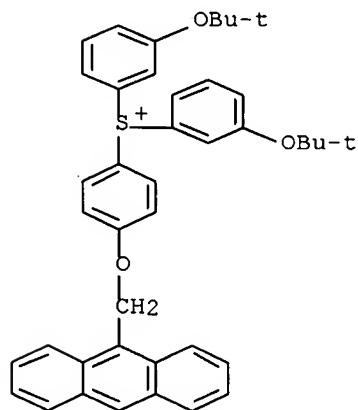
RN 219476-18-3 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 219475-45-3

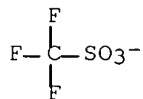
CMF C41 H41 O3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



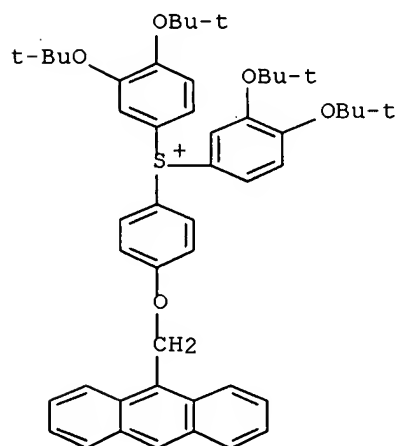
RN 219476-19-4 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 219475-47-5

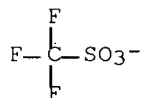
CMF C49 H57 O5 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



RN . 219476-20-7 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[[[1,1-

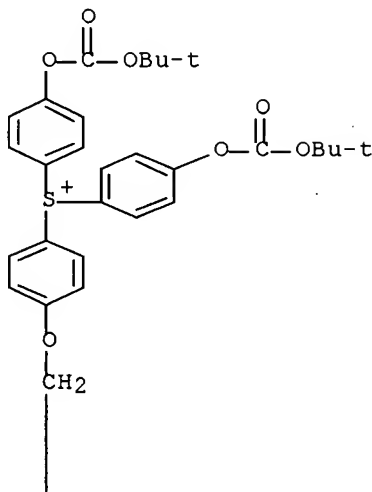
dimethylethoxy)carbonyl]oxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

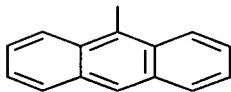
CRN 219475-50-0

CMF C43 H41 O7 S

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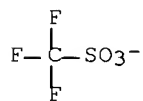
PAGE 2-A



CM 2

CRN 37181-39-8

CMF C F3 O3 S



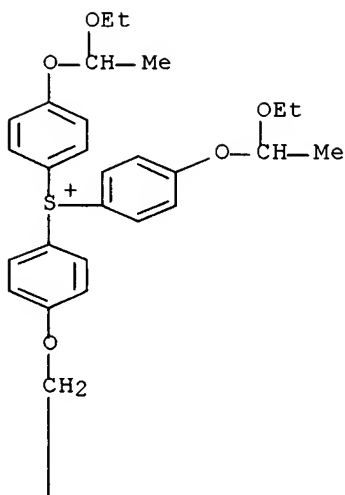
RN 219476-21-8 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1-ethoxyethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

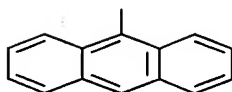
CM 1

CRN 219475-54-4
CMF C41 H41 O5 S

PAGE 1-A

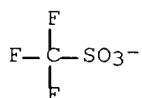


PAGE 2-A



CM 2

CRN 37181-39-8
CMF C F3 O3 S

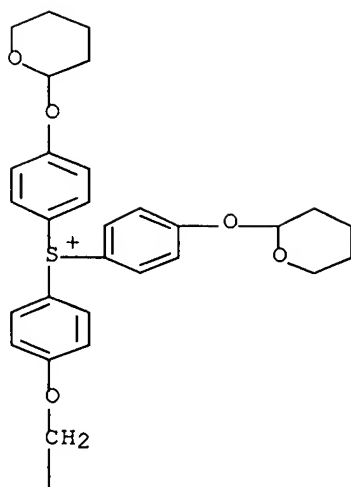


RN 219476-22-9 CAPLUS
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

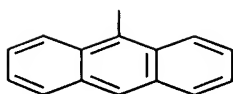
CM 1

CRN 219475-58-8
CMF C43 H41 O5 S

PAGE 1-A



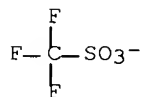
PAGE 2-A



CM 2

CRN 37181-39-8

CMF C F3 O3 S



RN 219476-23-0 CAPLUS

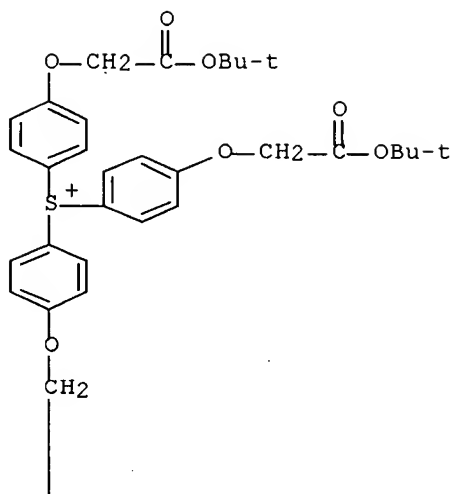
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

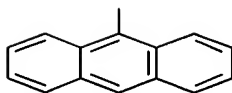
CRN 219475-62-4

CMF C45 H45 O7 S

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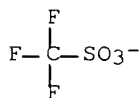
PAGE 2-A



CM 2

CRN 37181-39-8

CMF C F3 O3 S



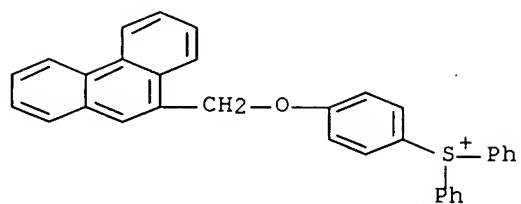
RN 219476-24-1 CAPLUS

CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-66-8

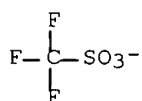
CMF C33 H25 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



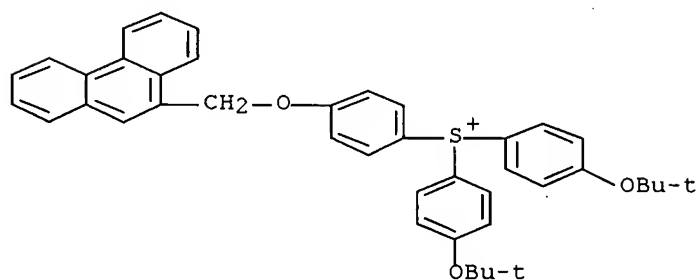
RN 219476-25-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-69-1

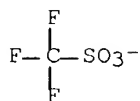
CMF C41 H41 O3 S



CM 2

CRN 37181-39-8

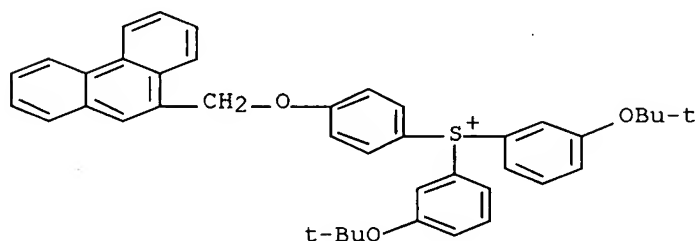
CMF C F3 O3 S



RN 219476-26-3 CAPLUS
 CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

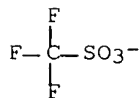
CM 1

CRN 219475-72-6
 CMF C41 H41 O3 S



CM 2

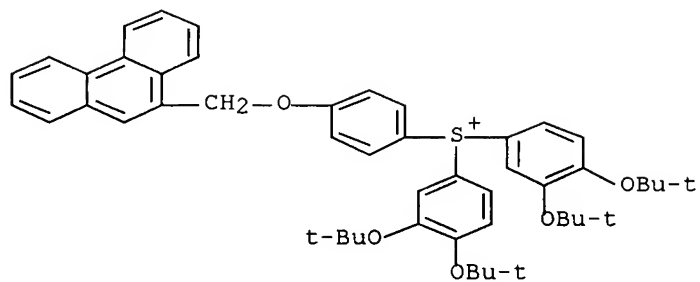
CRN 37181-39-8
 CMF C F3 O3 S



RN 219476-27-4 CAPLUS
 CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

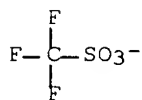
CRN 219475-75-9
 CMF C49 H57 O5 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



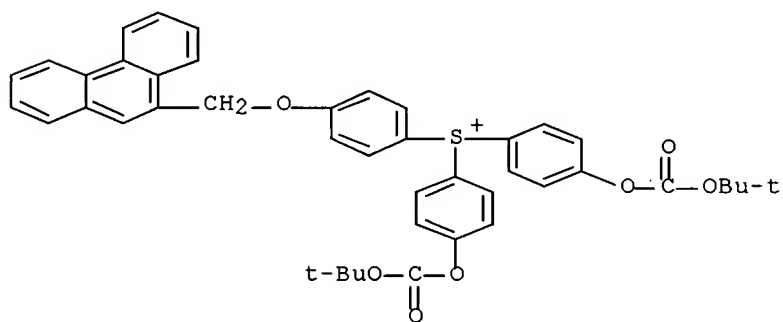
RN 219476-28-5 CAPLUS

CN Sulfonium, bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-78-2

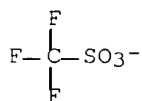
CMF C43 H41 O7 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

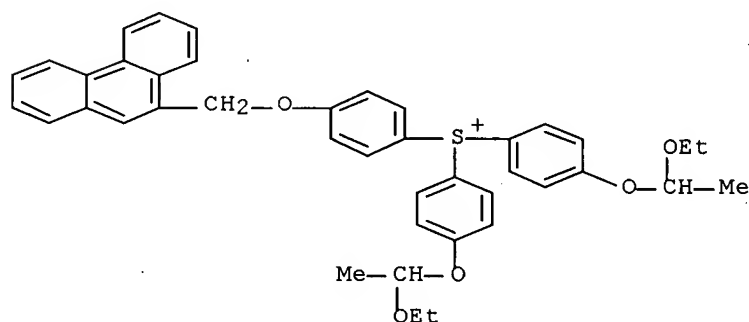


RN 219476-29-6 CAPLUS
 CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-
 , salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-81-7

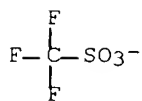
CMF C41 H41 O5 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

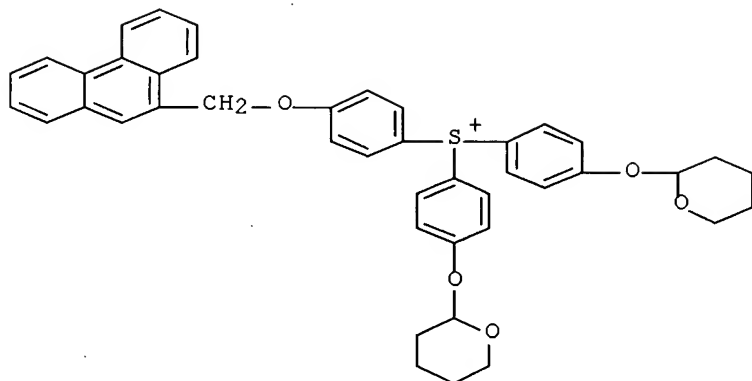


RN 219476-30-9 CAPLUS
 CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-84-0

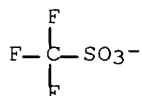
CMF C43 H41 O5 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



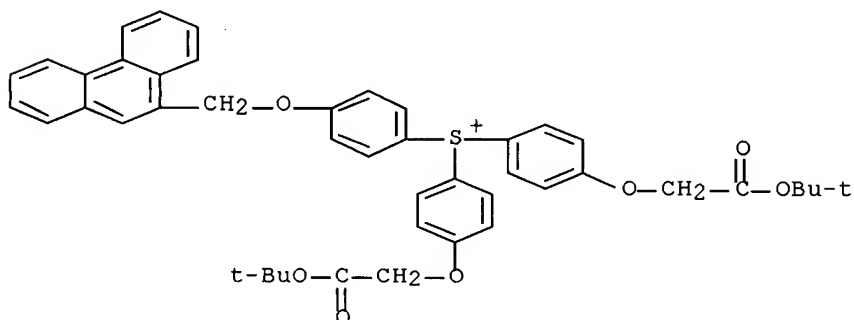
RN 219476-31-0 CAPLUS

CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-87-3

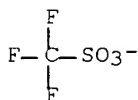
CMF C45 H45 O7 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



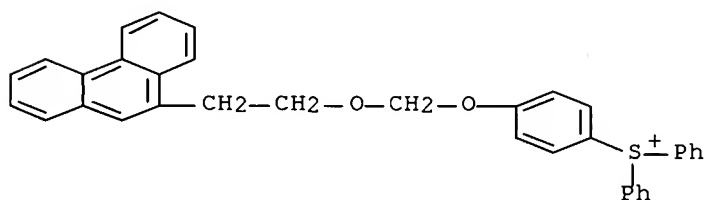
RN 219476-32-1 CAPLUS

CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-90-8

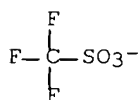
CMF C35 H29 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



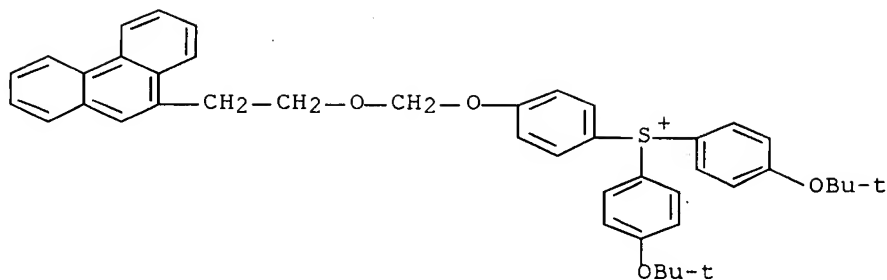
RN 219476-33-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-93-1

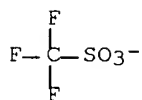
CMF C43 H45 O4 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



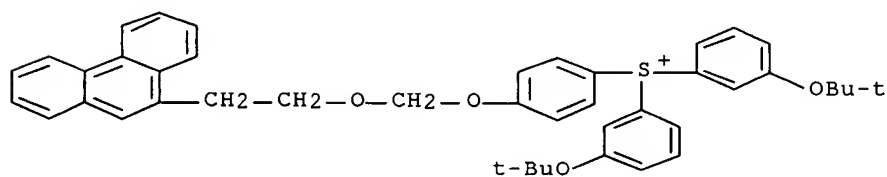
RN 219476-34-3 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-96-4

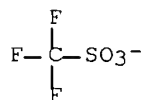
CMF C43 H45 O4 S



CM 2

CRN 37181-39-8

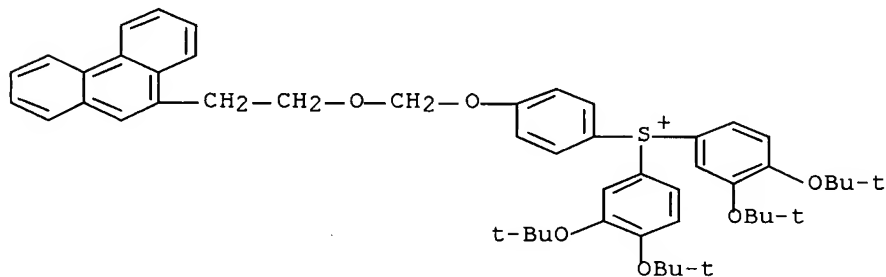
CMF C F3 O3 S



RN 219476-35-4 CAPLUS
 CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

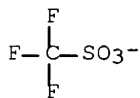
CM 1

CRN 219475-99-7
 CMF C51 H61 O6 S



CM 2

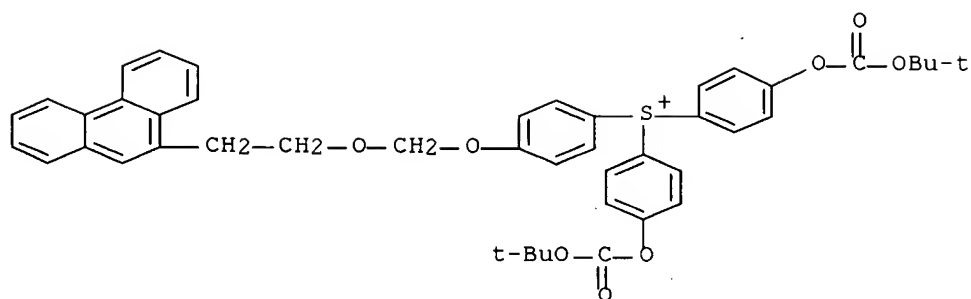
CRN 37181-39-8
 CMF C F3 O3 S



RN 219476-36-5 CAPLUS
 CN Sulfonium, bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

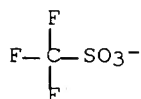
CRN 219476-02-5
 CMF C45 H45 O8 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



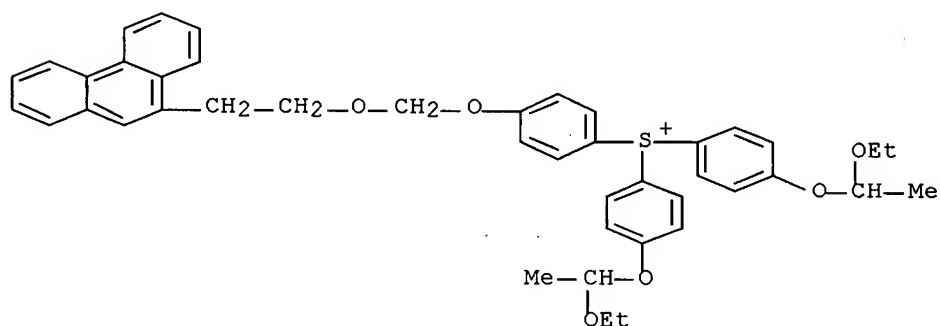
RN 219476-37-6 CAPLUS

CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-05-8

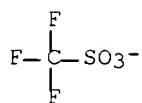
CMF C43 H45 O6 S



CM 2

CRN 37181-39-8

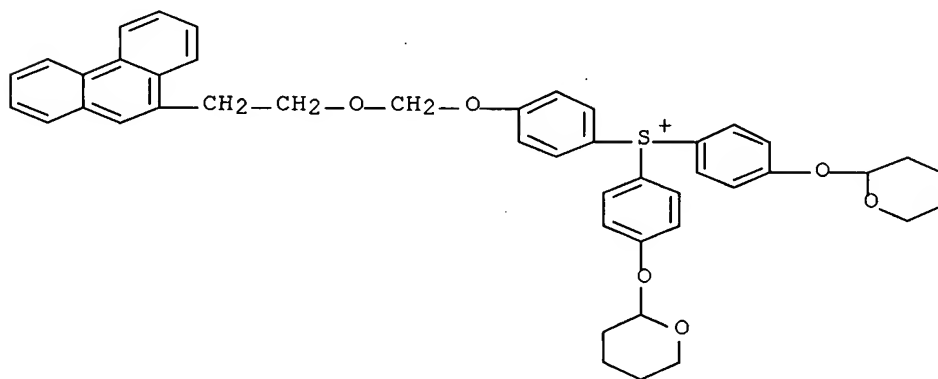
CMF C F3 O3 S



RN 219476-38-7 CAPLUS
 CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]bis[4-
 [(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with
 trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

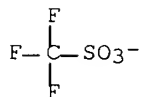
CM 1

CRN 219476-08-1
 CMF C45 H45 O6 S



CM 2

CRN 37181-39-8
 CMF C F3 O3 S

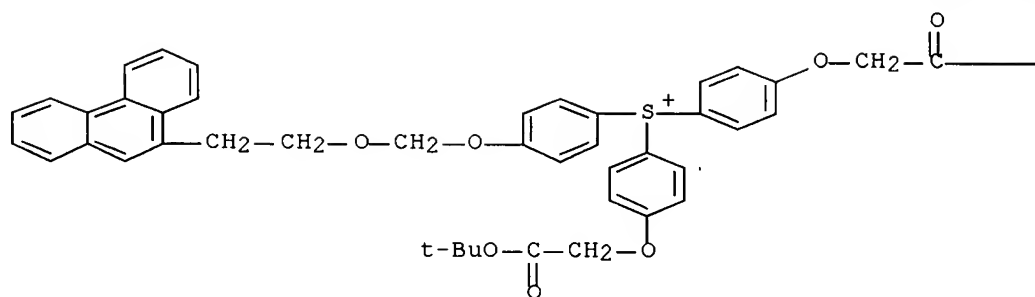


RN 219476-39-8 CAPLUS
 CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-10-5
 CMF C47 H49 O8 S

PAGE 1-A



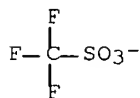
PAGE 1-B

—OBu-t

CM 2

CRN 37181-39-8

CMF C F3 O3 S



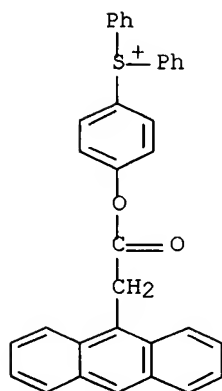
RN 219476-40-1 CAPLUS

CN Sulfonium, [4-[(9-anthracenylacetyl)oxy]phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-12-7

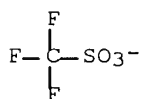
CMF C34 H25 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



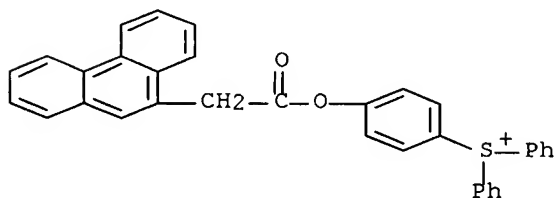
RN 219476-41-2 CAPLUS

CN Sulfonium, [4-[(9-phenanthrenylacetyl)oxy]phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-14-9

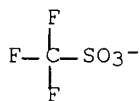
CMF C34 H25 O2 S



CM 2

CRN 37181-39-8

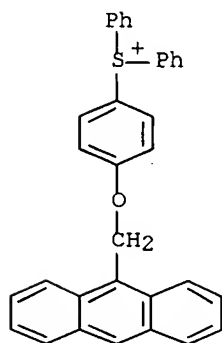
CMF C F3 O3 S



RN 219476-42-3 CAPLUS
 CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

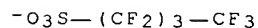
CM 1

CRN 219475-39-5
 CMF C33 H25 O S



CM 2

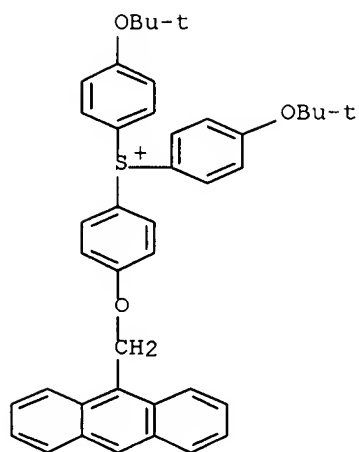
CRN 45187-15-3
 CMF C4 F9 O3 S



RN 219476-43-4 CAPLUS
 CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

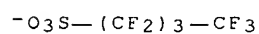
CRN 219475-43-1
 CMF C41 H41 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



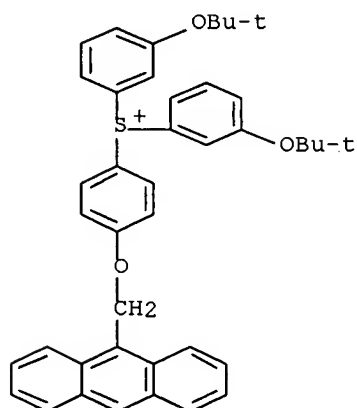
RN 219476-44-5 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-45-3

CMF C41 H41 O3 S



CM 2

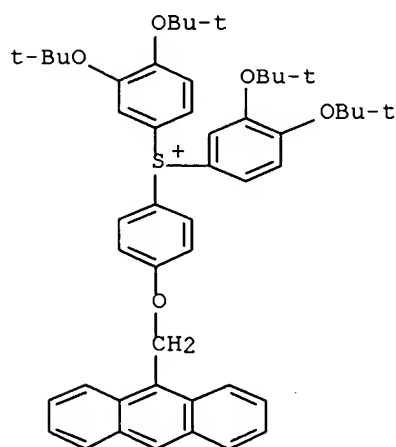
CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

RN 219476-45-6 CAPLUS
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-47-5
CMF C49 H57 O5 S



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

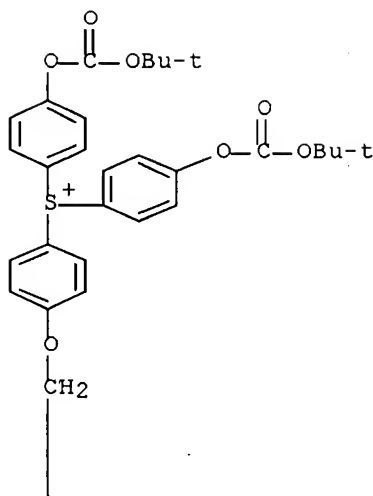
$^{-}O_3S-(CF_2)_3-CF_3$

RN 219476-46-7 CAPLUS
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

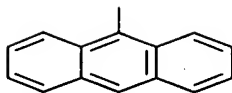
CM 1

CRN 219475-50-0
CMF C43 H41 O7 S

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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O₃S-(CF₂)₃-CF₃

RN 219476-47-8 CAPLUS

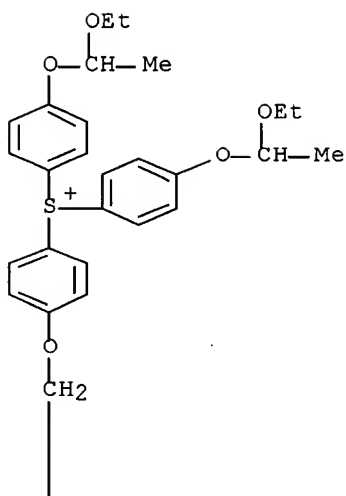
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1-ethoxyethoxy)phenyl]-,
 salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)
 (CA INDEX NAME)

CM 1

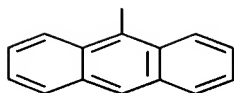
CRN 219475-54-4

CMF C41 H41 O5 S

PAGE 1-A



PAGE 2-A



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O₃S-(CF₂)₃-CF₃

RN 219476-48-9 CAPLUS

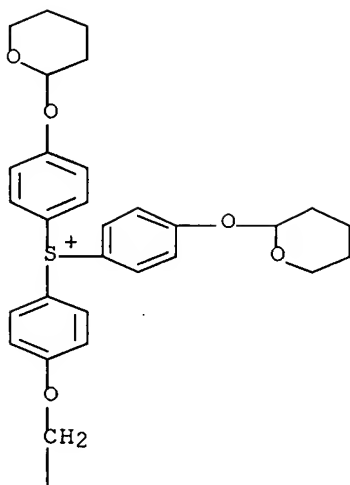
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

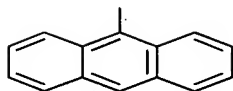
CRN 219475-58-8

CMF C43 H41 O5 S

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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $\text{-O}_3\text{S-(CF}_2\text{)}_3\text{-CF}_3$

RN 219476-50-3 CAPLUS

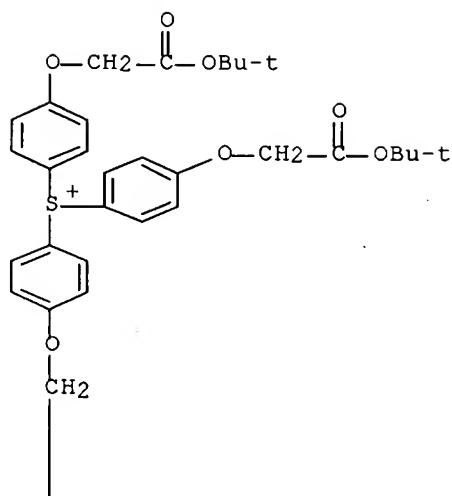
CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

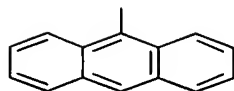
CRN 219475-62-4

CMF C45 H45 O7 S

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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O₃S-(CF₂)₃-CF₃

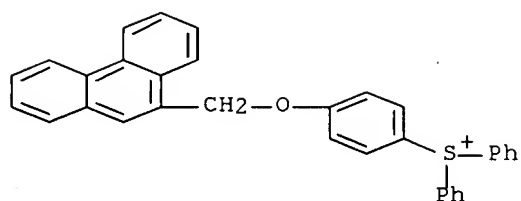
RN 219476-52-5 CAPLUS

CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 219475-66-8

CMF C33 H25 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

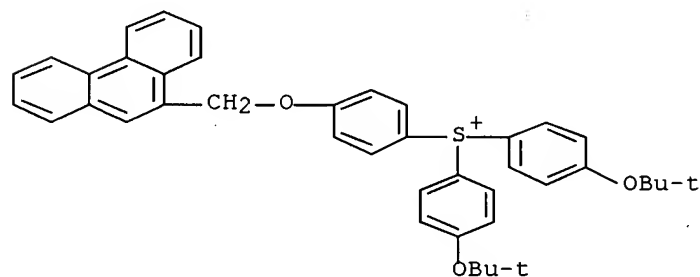
RN 219476-53-6 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-69-1

CMF C41 H41 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

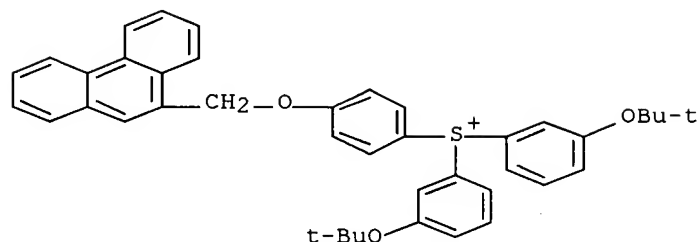
RN 219476-54-7 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-72-6

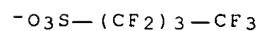
CMF C41 H41 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



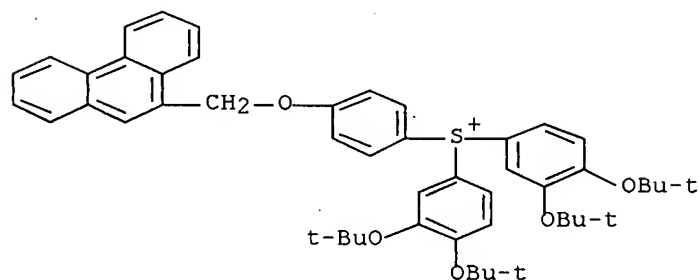
RN 219476-55-8 CAPLUS

CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-75-9

CMF C49 H57 O5 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

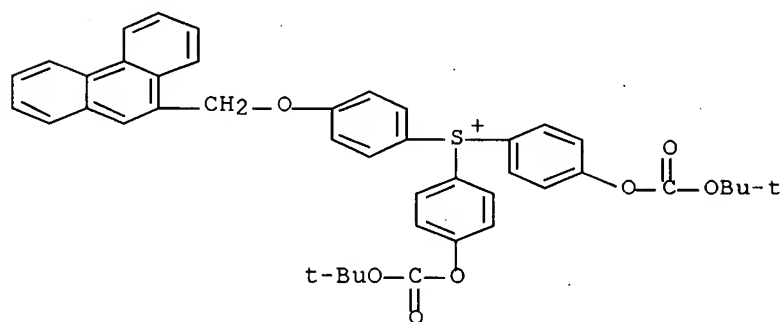
RN 219476-57-0 CAPLUS

CN Sulfonium, bis[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-78-2

CMF C43 H41 O7 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

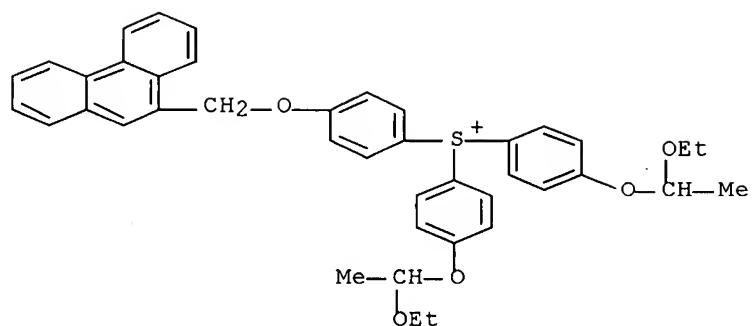
RN 219476-59-2 CAPLUS

CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-81-7

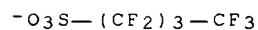
CMF C41 H41 O5 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



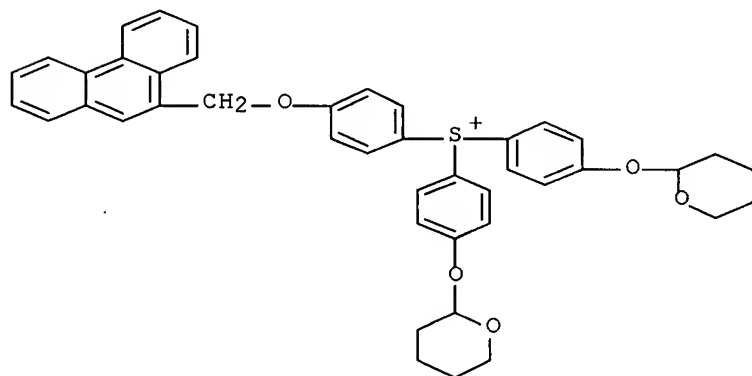
RN 219476-61-6 CAPLUS

CN Sulfonium, [4-(9-phenanthrenylmethoxy)phenyl]bis[4-[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-84-0

CMF C43 H41 O5 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

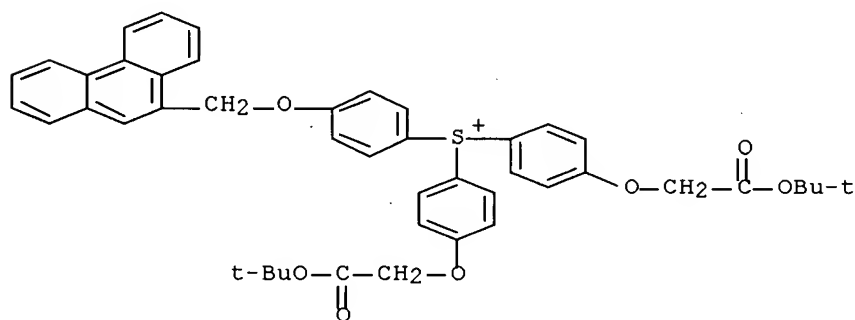
RN 219476-63-8 CAPLUS

CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-(9-phenanthrenylmethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-87-3

CMF C45 H45 O7 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

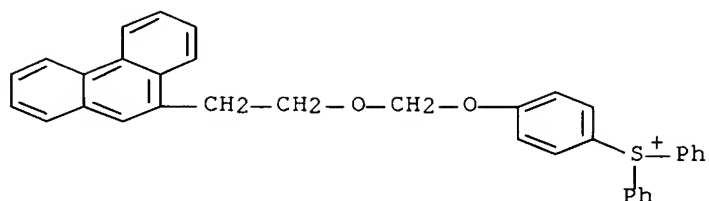
RN 219476-65-0 CAPLUS

CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-90-8

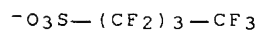
CMF C35 H29 O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



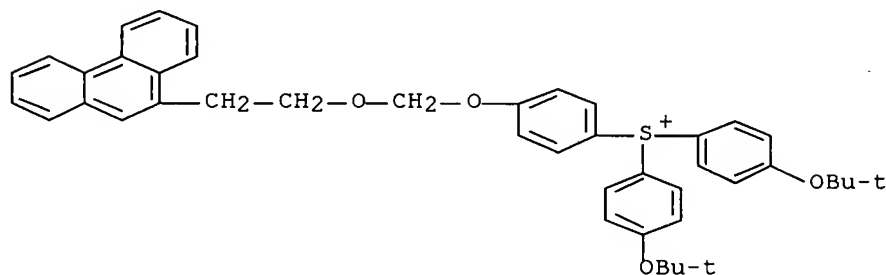
RN 219476-66-1 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-93-1

CMF C43 H45 O4 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



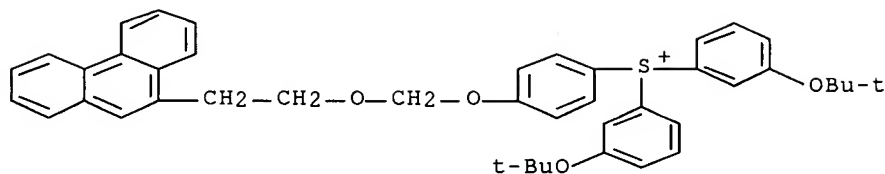
RN 219476-67-2 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-96-4

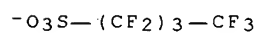
CMF C43 H45 O4 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



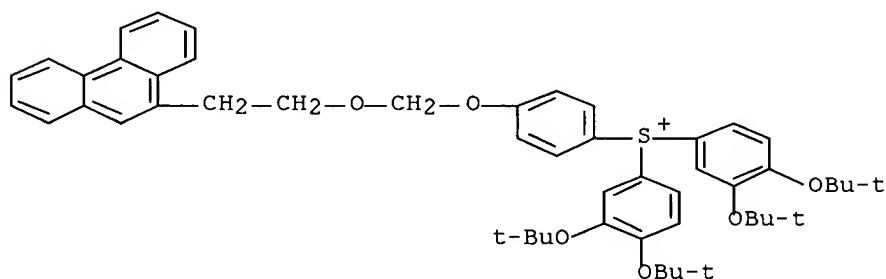
RN 219476-68-3 CAPLUS

CN Sulfonium, bis[3,4-bis(1,1-dimethylethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-99-7

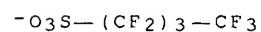
CMF C51 H61 O6 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

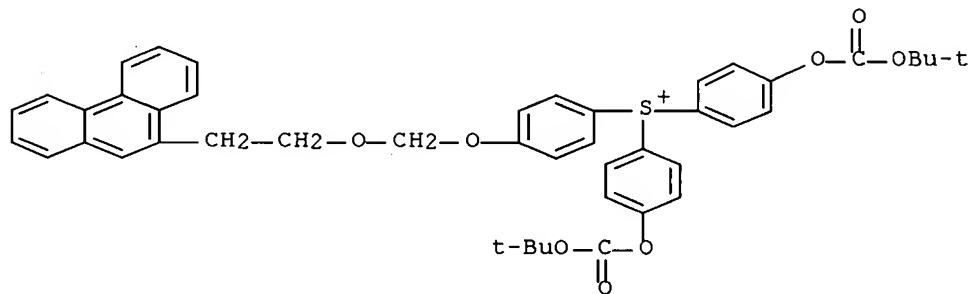


RN 219476-69-4 CAPLUS
 CN Sulfonium, bis[4-[[[1,1-dimethylethoxy)carbonyl]oxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-02-5

CMF C45 H45 O8 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

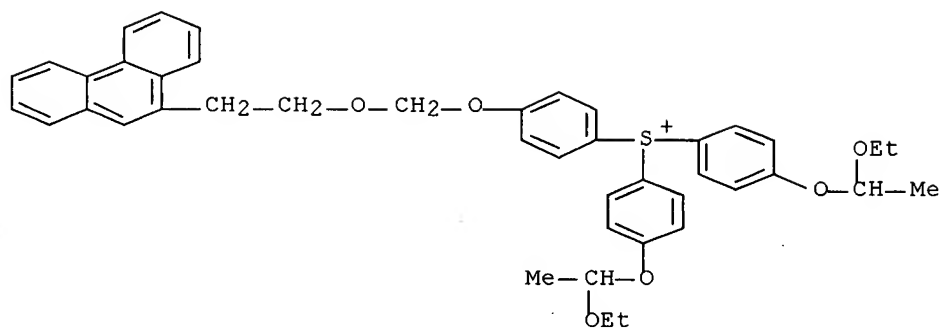
$\text{-O}_3\text{S-(CF}_2\text{)}_3\text{-CF}_3$

RN 219476-70-7 CAPLUS
 CN Sulfonium, bis[4-(1-ethoxyethoxy)phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-05-8

CMF C43 H45 O6 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O₃S-(CF₂)₃-CF₃

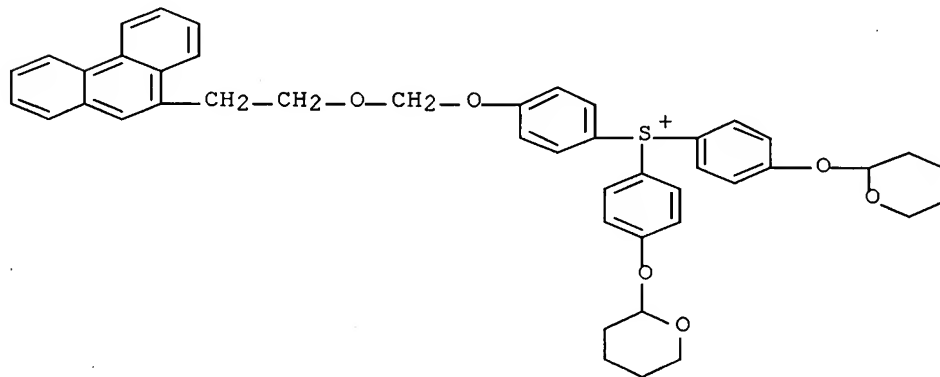
RN 219476-71-8 CAPLUS

CN Sulfonium, [4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]bis[4-
 [(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-
 nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-08-1

CMF C45 H45 O6 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$$-\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$$

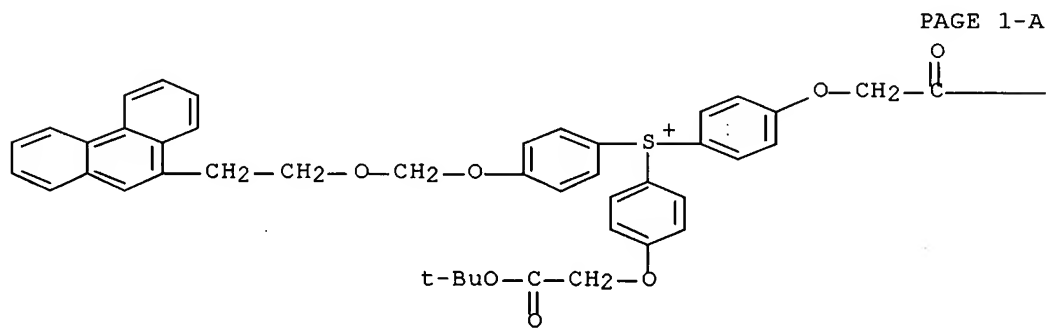
RN 219476-72-9 CAPLUS

CN Sulfonium, bis[4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl][4-[[2-(9-phenanthrenyl)ethoxy]methoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219476-10-5

CMF C47 H49 O8 S



PAGE 1-B

—OBu-t

CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$$-\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$$

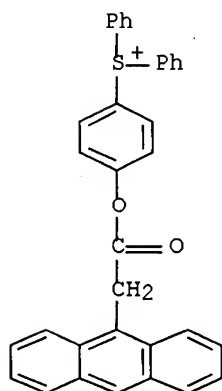
RN 219476-73-0 CAPLUS

CN Sulfonium, [4-[(9-anthracenylacetyl)oxy]phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butananesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 219476-12-7

CMF C34 H25 O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

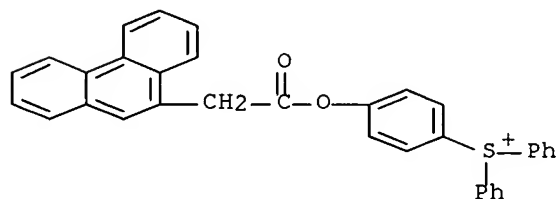
RN 219476-74-1 CAPLUS

CN Sulfonium, [4-[(9-phenanthrenylacetyl)oxy]phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 219476-14-9

CMF C34 H25 O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

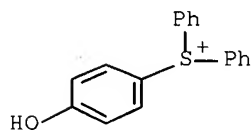
 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

IT 157692-56-3P 219475-42-0P
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (chemical amplified pos.-working photoresist containing sulfonium salt)
 RN 157692-56-3 CAPLUS
 CN Sulfonium, (4-hydroxyphenyl)diphenyl-, 4-methylbenzenesulfonate (1:1) (CA
 INDEX NAME)

CM 1

CRN 108493-51-2

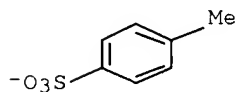
CMF C18 H15 O S



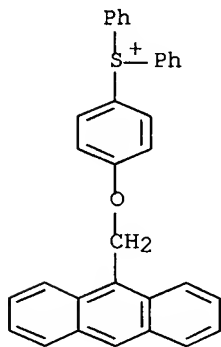
CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



RN 219475-42-0 CAPLUS
 CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]diphenyl-, chloride (9CI) (CA
 INDEX NAME)



● Cl⁻

IT 219475-40-8P 219475-44-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chemical amplified pos.-working photoresist containing sulfonium salt)

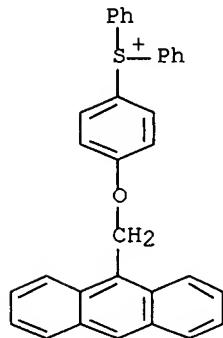
RN 219475-40-8 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-39-5

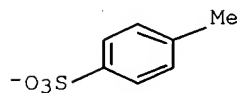
CMF C33 H25 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



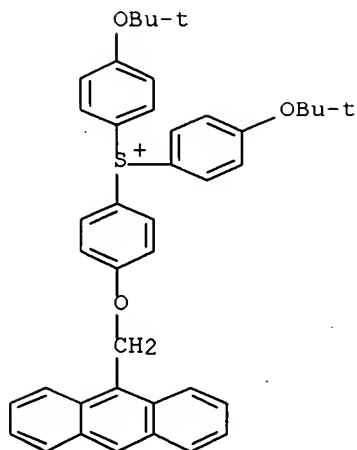
RN 219475-44-2 CAPLUS

CN Sulfonium, [4-(9-anthracenylmethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219475-43-1

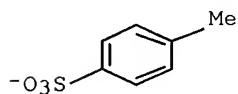
CMF C41 H41 O3 S



CM 2

CRN 16722-51-3

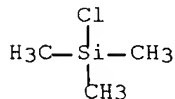
CMF C7 H7 O3 S



IT 75-77-4, Trimethylsilyl chloride, reactions 945-51-7,
 Diphenyl sulfoxide 161679-99-8 161680-01-9
 170632-59-4, Bis(4-tert-butoxy)phenyl sulfoxide
 184291-72-3 186889-62-3, Bis(3-tert-butoxy)phenyl
 sulfoxide 197727-94-9 197727-95-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chemical amplified pos.-working photoresist containing sulfonium salt)

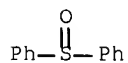
RN 75-77-4 CAPLUS

CN Silane, chlorotrimethyl- (CA INDEX NAME)



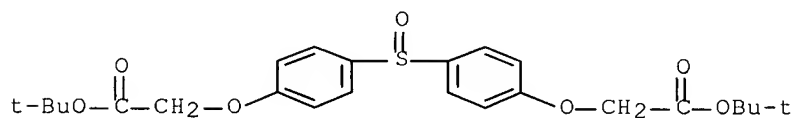
RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



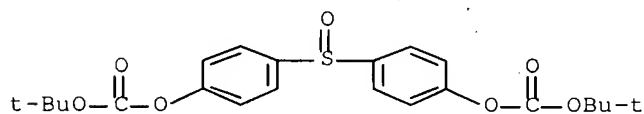
RN 161679-99-8 CAPLUS

CN Acetic acid, 2,2'-[sulfinylbis(4,1-phenyleneoxy)]bis-,
bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



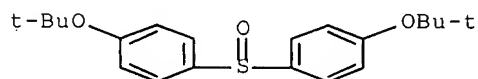
RN 161680-01-9 CAPLUS

CN Carbonic acid, sulfinyldi-4,1-phenylene bis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



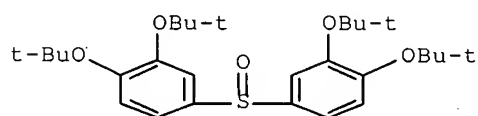
RN 170632-59-4 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



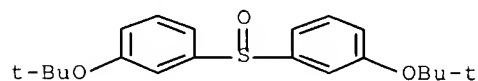
RN 184291-72-3 CAPLUS

CN Benzene, 1,1'-sulfinylbis[3,4-bis(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



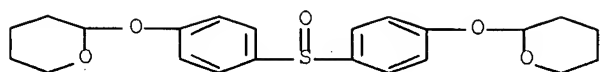
RN 186889-62-3 CAPLUS

CN Benzene, 1,1'-sulfinylbis[3-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



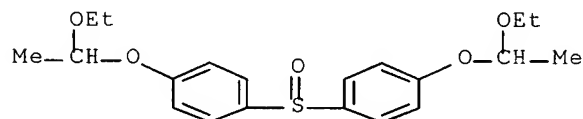
RN 197727-94-9 CAPLUS

CN 2H-Pyran, 2,2'-[sulfinylbis(4,1-phenyleneoxy)]bis[tetrahydro- (9CI) (CA INDEX NAME)



RN 197727-95-0 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-(1-ethoxyethoxy)- (9CI) (CA INDEX NAME)



IC ICM C07C321-30

ICS C07C309-30; C07C323-20; C07D309-12; C07F007-18; G03F007-004;
H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 25

IT 219475-46-4P 219475-48-6P 219475-51-1P
219475-55-5P 219475-59-9P 219475-63-5P
219475-67-9P 219475-70-4P 219475-73-7P
219475-76-0P 219475-79-3P 219475-82-8P
219475-85-1P 219475-88-4P 219475-91-9P
219475-94-2P 219475-97-5P 219476-00-3P
219476-03-6P 219476-06-9P 219476-09-2P
219476-11-6P 219476-13-8P 219476-15-0P
219476-16-1P 219476-17-2P 219476-18-3P
219476-19-4P 219476-20-7P 219476-21-8P
219476-22-9P 219476-23-0P 219476-24-1P
219476-25-2P 219476-26-3P 219476-27-4P
219476-28-5P 219476-29-6P 219476-30-9P
219476-31-0P 219476-32-1P 219476-33-2P
219476-34-3P 219476-35-4P 219476-36-5P
219476-37-6P 219476-38-7P 219476-39-8P
219476-40-1P 219476-41-2P 219476-42-3P
219476-43-4P 219476-44-5P 219476-45-6P
219476-46-7P 219476-47-8P 219476-48-9P
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219476-54-7P 219476-55-8P 219476-57-0P
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219476-65-0P 219476-66-1P 219476-67-2P
219476-68-3P 219476-69-4P 219476-70-7P
219476-71-8P 219476-72-9P 219476-73-0P
219476-74-1P

RL: PNU (Preparation, unclassified); PREP (Preparation)

(chemical amplified pos.-working photoresist containing sulfonium salt)

IT 157692-56-3P 219475-41-9P 219475-42-0P

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)

(chemical amplified pos.-working photoresist containing sulfonium salt)

IT 219475-40-8P 219475-44-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)

(chemical amplified pos.-working photoresist containing sulfonium salt)

IT 75-77-4, Trimethylsilyl chloride, reactions 104-15-4, reactions 106-48-9, 4-Chlorophenol 375-73-5, Nonafluorobutanesulfonic acid 945-51-7, Diphenyl sulfoxide 1493-13-6 6624-23-3, 9-Anthraceneacetic acid 7719-09-7, Thionyl chloride 24463-19-2, 9-Chloromethyl anthracene 25177-46-2, 9-Phenanthreneacetic acid 72917-30-7, 9-Anthraceneacetyl chloride 161453-44-7 161679-99-8 161680-01-9 170632-59-4, Bis(4-tert-butoxy)phenyl sulfoxide 184291-72-3 186889-62-3, Bis(3-tert-butoxy)phenyl sulfoxide 197727-94-9 197727-95-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(chemical amplified pos.-working photoresist containing sulfonium salt)

L53 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:106194 CAPLUS Full-text

DOCUMENT NUMBER: 128:210861

TITLE: Photoresist composition containing multiple arylsulfonium photoactive compounds, and formation of relief images using it

INVENTOR(S): Sinta, Roger F.; Cameron, James F.; Adams, Timothy G.; Rajaratnam, Martha M.; Cronin, Michael F.

PATENT ASSIGNEE(S): Shipley Co., L.L.C., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10039500	A	19980213	JP 1997-44543	19970124
US 5731364	A	19980324	US 1996-590785	19960124
			US 1996-590785	A 19960124

PRIORITY APPLN. INFO.:
OTHER SOURCE(S): MARPAT 128:210861

ED Entered STN: 21 Feb 1998

AB In the title composition comprising a resin binder and a photoactive component in an amount sufficient to permit development of an exposed coating layer of the composition, the photoactive component comprises ≥ 2 aryl sulfonium photoactive compds. including ≥ 1 aryl sulfonium compound having ≥ 2 cations. The relief image formation comprises the steps of applying a coating layer of the composition on a substrate, exposing the layer to patterned activating radiation, and developing the exposed layer. An article of manufacture having on ≥ 1 surface a coating layer of the composition is also claimed. The component is conveniently manufactured and the compns. useful as pos.- and neg.-working photoresists show high sensitivity toward deep UV rays and excellent microlithog. properties.

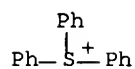
IT 3353-89-7P, Triphenylsulfonium bromide 13891-29-7P, Triphenylsulfonium tosylate 66003-78-9P 110928-18-2P 111281-12-0P 144089-15-6P 177786-98-0P 195072-47-0P 195244-72-5P, Triphenylsulfonium 4-trifluoromethylbenzenesulfonate 203927-77-9P

RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(photoresist composition containing arylsulfonium photo-acid generator)

RN 3353-89-7 CAPLUS

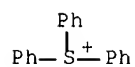
CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



RN 13891-29-7 CAPLUS
 CN Sulfonium, triphenyl-, 4-methylbenzenesulfonate (1:1) (CA INDEX NAME)

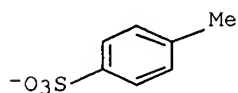
CM 1

CRN 18393-55-0
 CMF C18 H15 S



CM 2

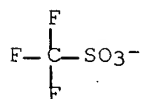
CRN 16722-51-3
 CMF C7 H7 O3 S



RN 66003-78-9 CAPLUS
 CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

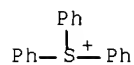
CM 1

CRN 37181-39-8
 CMF C F3 O3 S



CM 2

CRN 18393-55-0
 CMF C18 H15 S



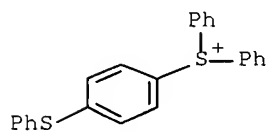
RN 110928-18-2 CAPLUS

CN Sulfonium, diphenyl[4-(phenylthio)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 47480-44-4

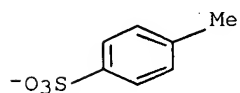
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CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



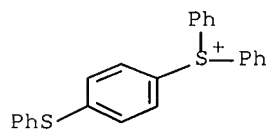
RN 111281-12-0 CAPLUS

CN Sulfonium, diphenyl[4-(phenylthio)phenyl]-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 47480-44-4

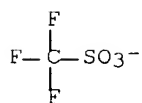
CMF C24 H19 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



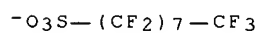
RN 144089-15-6 CAPLUS

CN Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-1-octanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 45298-90-6

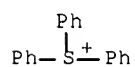
CMF C8 F17 O3 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



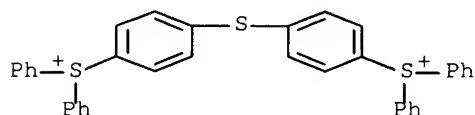
RN 177786-98-0 CAPLUS

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

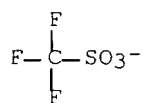
CMF C36 H28 S3



CM 2

CRN 37181-39-8

CMF C F3 O3 S

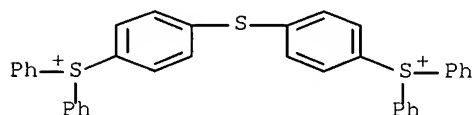


RN 195072-47-0 CAPLUS
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
 4-methylbenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

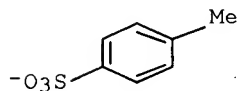
CMF C36 H28 S3



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

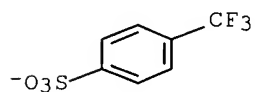


RN 195244-72-5 CAPLUS
 CN Sulfonium, triphenyl-, 4-(trifluoromethyl)benzenesulfonate (1:1) (CA
 INDEX NAME)

CM 1

CRN 120998-63-2

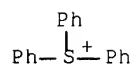
CMF C7 H4 F3 O3 S



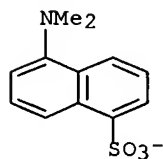
CM 2

CRN 18393-55-0

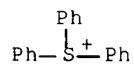
CMF C18 H15 S



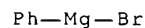
RN 203927-77-9 CAPLUS
 CN Sulfonium, triphenyl-, salt with 5-(dimethylamino)-1-naphthalenesulfonic acid (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 93279-97-1
 CMF C12 H12 N O3 S



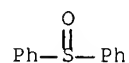
CM 2
 CRN 18393-55-0
 CMF C18 H15 S



IT 100-58-3, Phenylmagnesium bromide 945-51-7,
 Phenylsulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of arylsulfonium photo-acid generator)
 RN 100-58-3 CAPLUS
 CN Magnesium, bromophenyl- (CA INDEX NAME)



RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03C001-73; G03F007-038; G03F007-039; C07C381-12; C09K009-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 3353-89-7P, Triphenylsulfonium bromide 13891-29-7P, Triphenylsulfonium tosylate 66003-78-9P 110928-18-2P 111281-12-0P 144089-15-6P 177786-98-0P 195072-47-0P 195072-48-1P 195244-72-5P, Triphenylsulfonium 4-trifluoromethylbenzenesulfonate 203927-77-9P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (photoresist composition containing arylsulfonium photo-acid generator)

IT 75-75-2, Methanesulfonic acid 100-58-3, Phenylmagnesium bromide 104-15-4, p-Toluenesulfonic acid, reactions 139-66-2, Diphenyl sulfide 945-51-7, Phenylsulfoxide 1493-13-6, Triflic acid 2795-39-3, Potassium perfluorooctane sulfonate 2991-42-6, 4-Trifluoromethylbenzene sulfonyl chloride 4270-70-6, Triphenylsulfonium chloride 4272-77-9 16836-95-6, Silver p-toluenesulfonate 66003-76-7, Diphenyliodonium triflate 203927-87-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of arylsulfonium photo-acid generator)

L53 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:230496 CAPLUS Full-text

DOCUMENT NUMBER: 126:218586

TITLE: Chemically-amplified positive-working resist containing sulfonium photoacid generator

INVENTOR(S): Oosawa, Yoichi; Takemura, Katsuya; Watanabe, Satoshi; Ishihara, Toshinobu; Nagura, Shigehiro; Tanaka, Haruyori; Kawai, Yoshio; Nakamura, Jiro

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF

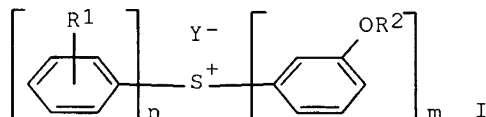
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09015848	A	19970117	JP 1995-186167	19950629
JP 3399166	B2	20030421		
PRIORITY APPLN. INFO.:			JP 1995-186167	19950629
OTHER SOURCE(S): MARPAT 126:218586				
ED Entered STN: 09 Apr 1997				
GI				



AB The resist contains a sulfonium salt I [R1 = H, alkyl, alkoxy, dialkylamino; OR2 = acid-labile group; Y = (un)substituted alkyl- or arylsulfonate; n = 0-2,

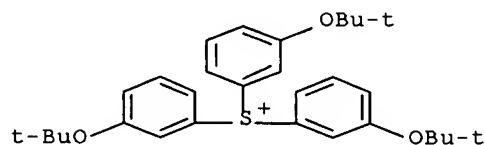
m = 1-3, m + n = 3]. The material provides high resolution patterns with good profile.

IT 186769-08-4P 186889-18-9P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (chemical-amplified pos.-working resists containing sulfonium photoacid generators)

RN 186769-08-4 CAPLUS
 CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

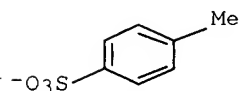
CM 1

CRN 186769-07-3
 CMF C30 H39 O3 S



CM 2

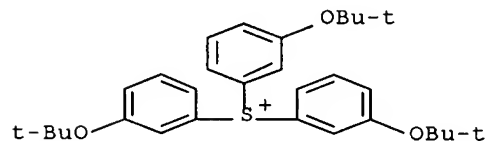
CRN 16722-51-3
 CMF C7 H7 O3 S



RN 186889-18-9 CAPLUS
 CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

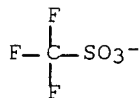
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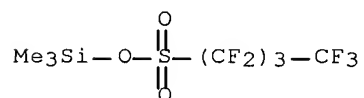
CM 2

CRN 37181-39-8

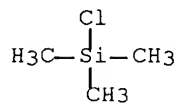
CMF C F3 O3 S



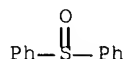
IT 68734-62-3P, Trimethylsilyl nonafluorobutanesulfonate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (in preparation of photoacid generator by Grignard reaction for
 photoresists)
 RN 68734-62-3 CAPLUS
 CN 1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, trimethylsilyl ester
 (9CI) (CA INDEX NAME)



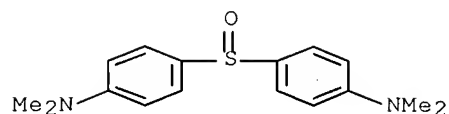
IT 75-77-4, Trimethylsilyl chloride, reactions 945-51-7,
 Diphenyl sulfoxide 15156-67-9, Bis(4-dimethylaminophenyl)
 sulfoxide 27607-77-8, Trimethylsilyl trifluoromethanesulfonate
 186889-62-3, Bis(3-tert-butoxyphenyl) sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of photoacid generator by Grignard reaction for
 photoresists)
 RN 75-77-4 CAPLUS
 CN Silane, chlorotrimethyl- (CA INDEX NAME)



RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)

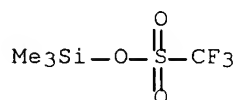


RN 15156-67-9 CAPLUS
 CN Benzenamine, 4,4'-sulfinylbis[N,N-dimethyl- (9CI) (CA INDEX NAME)



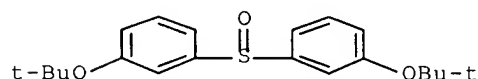
RN 27607-77-8 CAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 186889-62-3 CAPLUS

CN Benzene, 1,1'-sulfinylbis[3-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



IT 186889-21-4P 186889-24-7P 186889-27-0P

186889-30-5P 186889-33-8P 186889-35-0P

186889-37-2P 186889-39-4P 186889-41-8P

186889-43-0P 186889-45-2P 186889-47-4P

186889-49-6P 186889-60-1P 188022-57-3P

RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP

(Preparation); USES (Uses)

(preparation of photoacid generator by Grignard reaction for photoresists)

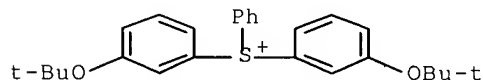
RN 186889-21-4 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-20-3

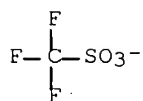
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



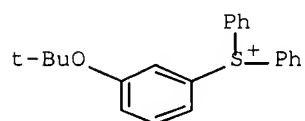
RN 186889-24-7 CAPLUS

CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-23-6

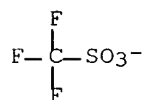
CMF C22 H23 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



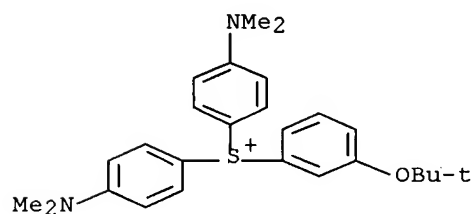
RN 186889-27-0 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-26-9

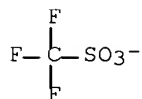
CMF C26 H33 N2 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



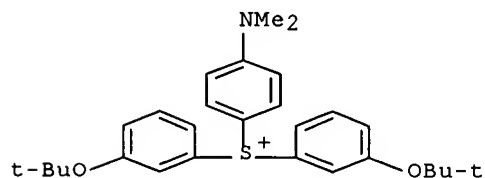
RN 186889-30-5 CAPLUS

CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-29-2

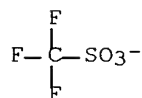
CMF C28 H36 N O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



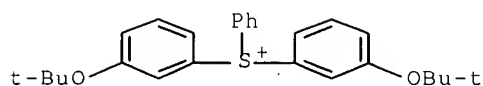
RN 186889-33-8 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-20-3

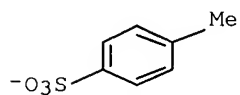
CMF C26 H31 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



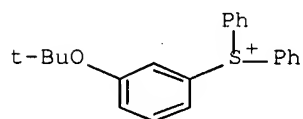
RN 186889-35-0 CAPLUS

CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-23-6

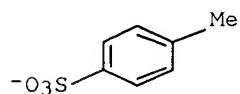
CMF C22 H23 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



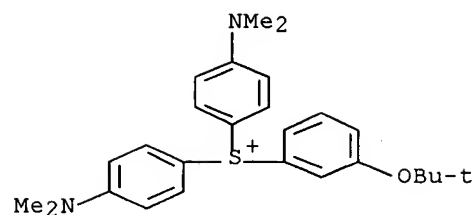
RN 186889-37-2 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-26-9

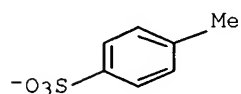
CMF C26 H33 N2 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



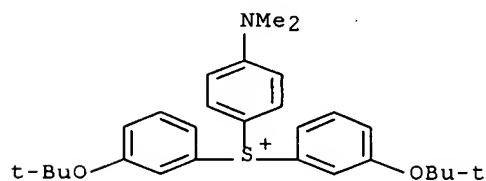
RN 186889-39-4 CAPLUS

CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-29-2

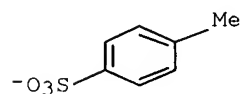
CMF C28 H36 N O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



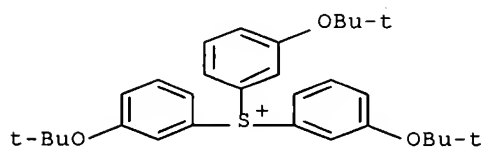
RN 186889-41-8 CAPLUS

CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186769-07-3

CMF C30 H39 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



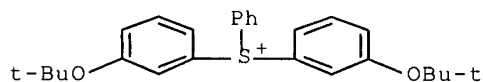
RN 186889-43-0 .CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 186889-20-3

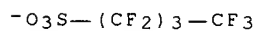
CMF C26 H31 O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



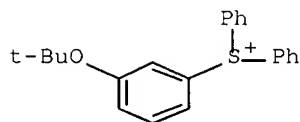
RN 186889-45-2 CAPLUS

CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 186889-23-6

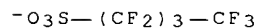
CMF C22 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



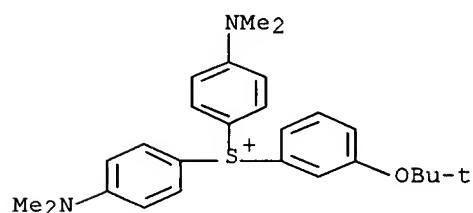
RN 186889-47-4 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-,
salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 186889-26-9

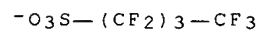
CMF C26 H33 N2 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 186889-49-6 CAPLUS

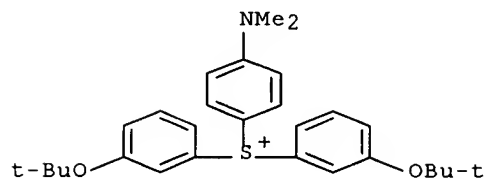
CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-,
salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)

(CA INDEX NAME)

CM 1

CRN 186889-29-2

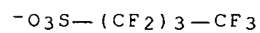
CMF C28 H36 N O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



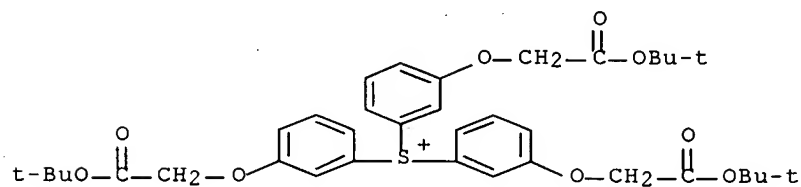
RN 186889-60-1 CAPLUS

CN Sulfonium, tris[3-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-59-8

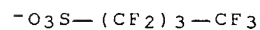
CMF C36 H45 O9 S



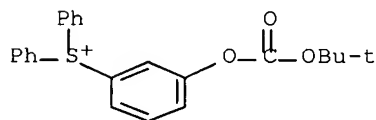
CM 2

CRN 45187-15-3

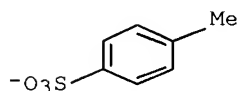
CMF C4 F9 O3 S



RN 188022-57-3 CAPLUS
 CN Sulfonium, [3-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]diphenyl-, salt
 with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 186889-56-5
 CMF C23 H23 O3 S



CM 2
 CRN 16722-51-3
 CMF C7 H7 O3 S



IC ICM G03F007-004
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 IT 186769-08-4P 186889-18-9P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP
 (Preparation); USES (Uses)
 (chemical-amplified pos.-working resists containing sulfonium photoacid
 generators)
 IT 17872-98-9P, Trimethylsilyl p-toluenesulfonate 68734-62-3P,
 Trimethylsilyl nonafluorobutanesulfonate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (in preparation of photoacid generator by Grignard reaction for
 photoresists)
 IT 75-77-4, Trimethylsilyl chloride, reactions 104-15-4,
 p-Toluenesulfonic acid, reactions 375-73-5, Nonafluorobutanesulfonic
 acid 945-51-7, Diphenyl sulfoxide 15156-67-9,
 Bis(4-dimethylaminophenyl) sulfoxide 27607-77-8, Trimethylsilyl
 trifluoromethanesulfonate 123195-73-3 186889-62-3,
 Bis(3-tert-butoxyphenyl) sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of photoacid generator by Grignard reaction for
 photoresists)
 IT 186889-21-4P 186889-24-7P 186889-27-0P
 186889-30-5P 186889-33-8P 186889-35-0P
 186889-37-2P 186889-39-4P 186889-41-8P
 186889-43-0P 186889-45-2P 186889-47-4P
 186889-49-6P 186889-60-1P 188022-57-3P
 RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP

(Preparation); USES (Uses)

(preparation of photoacid generator by Grignard reaction for photoresists)

L53 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:154980 CAPLUS Full-text

DOCUMENT NUMBER: 126:179054

TITLE: Preparation of triphenylsulfonium salts as acid generating agents for chemically amplified positive photoresists

INVENTOR(S): Oosawa, Yoichi; Takemura, Katsuya; Watanabe, Satoshi; Ishihara, Toshinobu; Nagura, Shigehiro

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

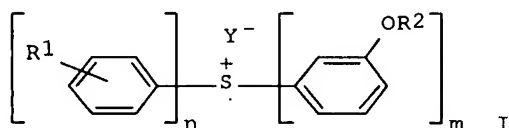
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09012537	A	19970114	JP 1995-186168	19950629
JP 3606291	B2	20050105		
PRIORITY APPLN. INFO.:			JP 1995-186168	19950629
OTHER SOURCE(S):			MARPAT 126:179054	
ED Entered STN: 10 Mar 1997				
GI				



AB Triphenylsulfonium salts [I; R1 = H, alkyl, alkoxy, dialkylamino; OR2 = acid-unstable group; Y = (un)substituted alkylsulfonate or arylsulfonate; n = 0-2; m = 1-3, n + m = 3] are prepared I are useful as components of chemical amplified pos. photoresists with high resolution and suitable for microlithog. of LSI. Thus, 28.6 g trimethylsilyl triflate was added dropwise to a solution of 17.8 g bis(3-tert-butoxyphenyl) sulfoxide and 5.3 g Et3N in DMF at <10° and stirred at 0-10° for 30 min, followed by adding dropwise a Grignard reagent prepared from 3-tert-butoxychlorobenzene and Mg in THF, and the resulting mixture was allowed to react at 0-10° for 30 min to give 29% tris(3-tert-butoxyphenyl)sulfonium triflate (II) of 99% purity. II showed mol. extinction coefficient of 12,200 at 248 nm (UV). A photoresist containing II, poly(p-hydroxystyrene) tert-butoxycarbonate ester (alkali-soluble resin), 2,2'-bis(tert-butoxycarbonyloxyphenyl)propane (dissoln. inhibitor), and 1-ethoxy-2-propanol was spin-coated at 0.8 μm thickness on a silicon wafer, baked at 100° for 120 s, exposed by an excimer laser stepper, baked at 90° for 60 s, and developed by 38% Me4NOH to give a pos. pattern with 5.0 Ml/cm2 sensitivity and 0.22 μm resolution

IT 75-77-4, Trimethylsilyl chloride, reactions 100-59-4, Phenylmagnesium chloride 945-51-7, Diphenyl sulfoxide 7353-91-5, 4-Dimethylaminophenylmagnesium bromide 15156-67-9, Bis(4-dimethylaminophenyl) sulfoxide

27607-77-8, Trimethylsilyl triflate 186889-62-3,

Bis(3-tert-butoxyphenyl) sulfoxide 186889-64-5,

3-tert-Butoxyphenylmagnesium chloride

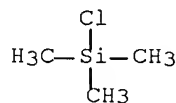
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of triphenylsulfonium salts as acid generating agents for chemical

amplified pos. photoresists)

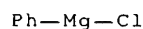
RN 75-77-4 CAPLUS

CN Silane, chlorotrimethyl- (CA INDEX NAME)



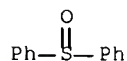
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (CA INDEX NAME)



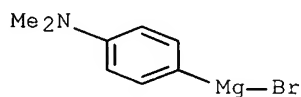
RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



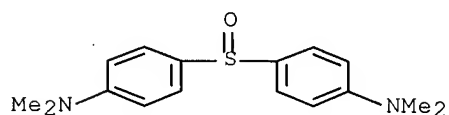
RN 7353-91-5 CAPLUS

CN Magnesium, bromo[4-(dimethylamino)phenyl]- (9CI) (CA INDEX NAME)



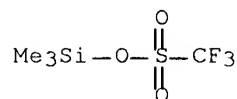
RN 15156-67-9 CAPLUS

CN Benzenamine, 4,4'-sulfinylbis[N,N-dimethyl- (9CI) (CA INDEX NAME)

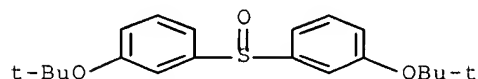


RN 27607-77-8 CAPLUS

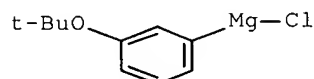
CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 186889-62-3 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[3-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)

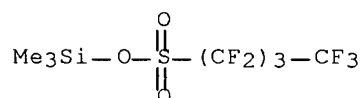


RN 186889-64-5 CAPLUS
 CN Magnesium, chloro[3-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)



IT 68734-62-3P, Trimethylsilyl nonafluorobutanesulfonate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of triphenylsulfonium salts as acid generating agents for
 chemical amplified pos. photoresists)

RN 68734-62-3 CAPLUS
 CN 1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, trimethylsilyl ester
 (9CI) (CA INDEX NAME)



IT 186769-08-4P, Tris(3-tert-butoxyphenyl)sulfonium
 4-toluenesulfonate 186889-18-9P, Tris(3-tert-
 butoxyphenyl)sulfonium trifluoromethanesulfonate 186889-21-4P,
 Bis(3-tert-butoxyphenyl)phenylsulfonium trifluoromethanesulfonate
 186889-24-7P, (3-tert-Butoxyphenyl)diphenylsulfonium
 trifluoromethanesulfonate 186889-27-0P, (3-tert-
 Butoxyphenyl)bis(4-dimethylaminophenyl)sulfonium trifluoromethanesulfonate
 186889-30-5P, Bis(3-tert-butoxyphenyl)(4-
 dimethylaminophenyl)sulfonium trifluoromethanesulfonate
 186889-33-8P, Bis(3-tert-butoxyphenyl)phenylsulfonium
 4-toluenesulfonate 186889-35-0P, (3-tert-
 Butoxyphenyl)diphenylsulfonium 4-toluenesulfonate 186889-37-2P,

(3-tert-Butoxyphenyl)bis(4-dimethylaminophenyl)sulfonium
 4-toluenesulfonate 186889-39-4P, Bis(3-tert-butoxyphenyl)(4-
 dimethylaminophenyl)sulfonium 4-toluenesulfonate 186889-41-8P,
 Tris(3-tert-butoxyphenyl)sulfonium nonafluorobutanesulfonate
 186889-43-0P, Bis(3-tert-butoxyphenyl)phenylsulfonium
 nonafluorobutanesulfonate 186889-45-2P, (3-tert-
 Butoxyphenyl)diphenylsulfonium nonafluorobutanesulfonate
 186889-47-4P, (3-tert-Butoxyphenyl)bis(4-
 dimethylaminophenyl)sulfonium nonafluorobutanesulfonate
 186889-49-6P, Bis(3-tert-butoxyphenyl)(4-
 dimethylaminophenyl)sulfonium nonafluorobutanesulfonate
 186889-52-1P, Bis(3-tert-butoxycarbonyloxyphenyl)phenylsulfonium
 nonafluorobutanesulfonate 186889-54-3P, (3-tert-
 Butoxycarbonylmethyloxyphenyl)diphenylsulfonium nonafluorobutanesulfonate
 186889-57-6P, (3-tert-Butoxycarbonyloxyphenyl)diphenylsulfonium
 nonafluorobutanesulfonate 186889-60-1P, Tris(3-tert-
 butoxycarbonylmethyloxyphenyl)sulfonium nonafluorobutanesulfonate
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)

(preparation of triphenylsulfonium salts as acid generating agents for
 chemical

amplified pos. photoresists)

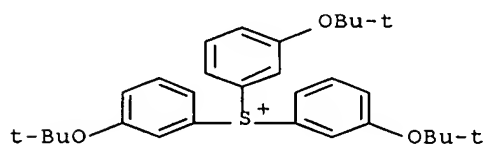
RN 186769-08-4 CAPLUS

CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186769-07-3

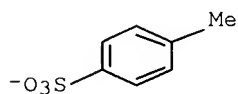
CMF C30 H39 O3 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

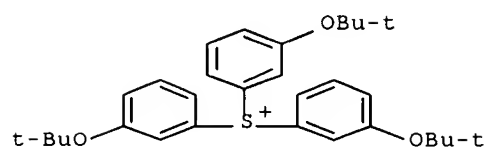


RN 186889-18-9 CAPLUS

CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with
 trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

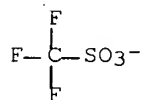
CM 1

CRN 186769-07-3
CMF C30 H39 O3 S



CM 2

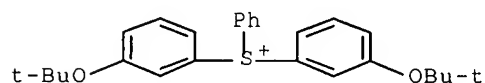
CRN 37181-39-8
CMF C F3 O3 S



RN 186889-21-4 CAPLUS
CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

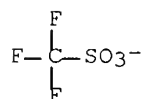
CM 1

CRN 186889-20-3
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8
CMF C F3 O3 S

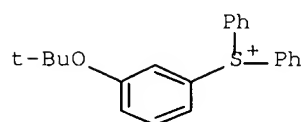


RN 186889-24-7 CAPLUS
CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-23-6

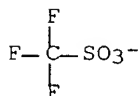
CMF C22 H23 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



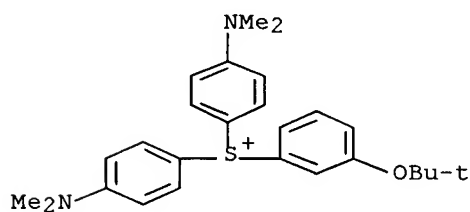
RN 186889-27-0 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-,
salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-26-9

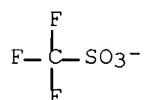
CMF C26 H33 N2 O S



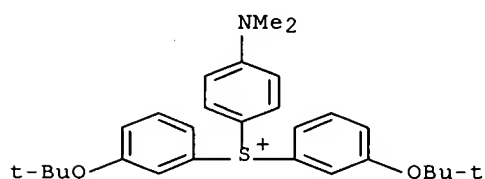
CM 2

CRN 37181-39-8

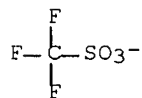
CMF C F3 O3 S



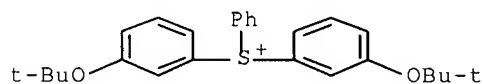
RN 186889-30-5 CAPLUS
 CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 186889-29-2
 CMF C28 H36 N O2 S



CM 2
 CRN 37181-39-8
 CMF C F3 O3 S

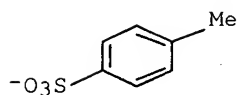


RN 186889-33-8 CAPLUS
 CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)
 CM 1
 CRN 186889-20-3
 CMF C26 H31 O2 S



CM 2

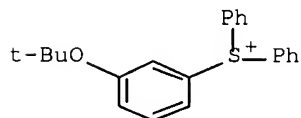
CRN 16722-51-3
CMF C7 H7 O3 S



RN 186889-35-0 CAPLUS
CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

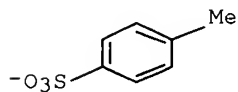
CM 1

CRN 186889-23-6
CMF C22 H23 O S



CM 2

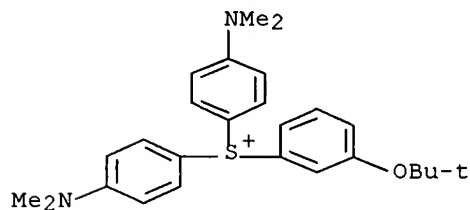
CRN 16722-51-3
CMF C7 H7 O3 S



RN 186889-37-2 CAPLUS
CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-,
salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

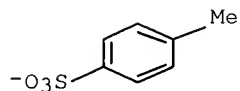
CRN 186889-26-9
CMF C26 H33 N2 O S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



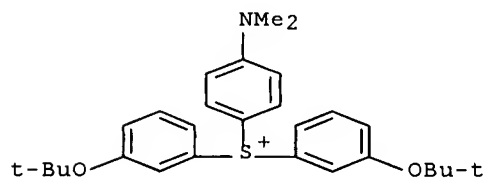
RN 186889-39-4 CAPLUS

CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-29-2

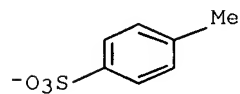
CMF C28 H36 N O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



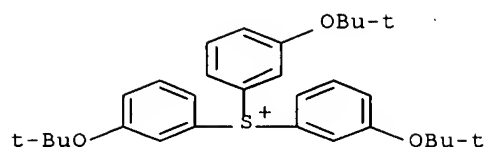
RN 186889-41-8 CAPLUS

CN Sulfonium, tris[3-(1,1-dimethylethoxy)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186769-07-3

CMF C30 H39 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

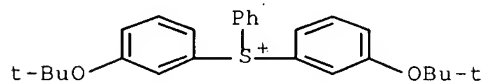
RN 186889-43-0 CAPLUS

CN Sulfonium, bis[3-(1,1-dimethylethoxy)phenyl]phenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 186889-20-3

CMF C26 H31 O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

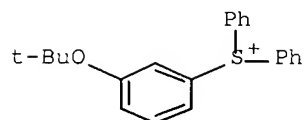
RN 186889-45-2 CAPLUS

CN Sulfonium, [3-(1,1-dimethylethoxy)phenyl]diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX
NAME)

CM 1

CRN 186889-23-6

CMF C22 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

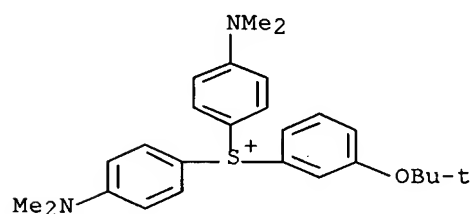
RN 186889-47-4 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][3-(1,1-dimethylethoxy)phenyl]-,
salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 186889-26-9

CMF C26 H33 N2 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

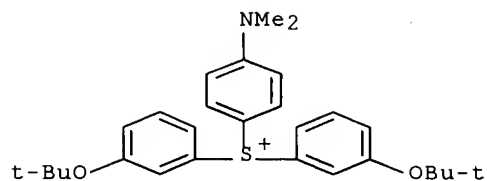
RN 186889-49-6 CAPLUS

CN Sulfonium, [4-(dimethylamino)phenyl]bis[3-(1,1-dimethylethoxy)phenyl]-,
salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 186889-29-2

CMF C28 H36 N O2 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

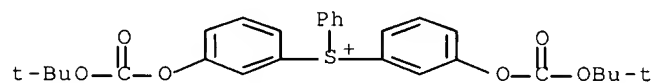
RN 186889-52-1 CAPLUS

CN Sulfonium, bis[3-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]phenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-51-0

CMF C28 H31 O6 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

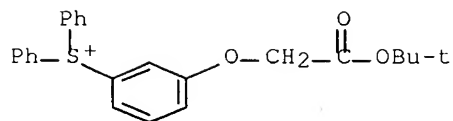
RN 186889-54-3 CAPLUS

CN Sulfonium, [3-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-53-2

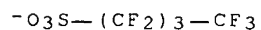
CMF C24 H25 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



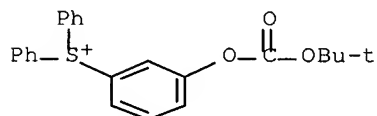
RN 186889-57-6 CAPLUS

CN Sulfonium, [3-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-56-5

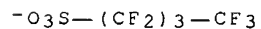
CMF C23 H23 O3 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



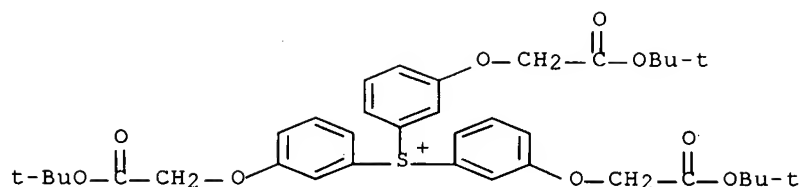
RN 186889-60-1 CAPLUS

CN Sulfonium, tris[3-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186889-59-8

CMF C36 H45 O9 S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O₃S-(CF₂)₃-CF₃

- IC ICM C07C381-12
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT 75-77-4, Trimethylsilyl chloride, reactions 100-59-4, Phenylmagnesium chloride 104-15-4, p-Toluenesulfonic acid, reactions 107-59-5, tert-Butyl chloroacetate 375-73-5, Nonafluorobutanesulfonic acid 945-51-7, Diphenyl sulfoxide 7353-91-5, 4-Dimethylaminophenylmagnesium bromide 15156-67-9, Bis(4-dimethylaminophenyl) sulfoxide 24424-99-5, Di-tert-butyl dicarbonate 27607-77-8, Trimethylsilyl triflate 123195-73-3, 3-tert-Butoxychlorobenzene 186889-62-3, Bis(3-tert-butoxyphenyl) sulfoxide 186889-64-5, 3-tert-Butoxyphenylmagnesium chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triphenylsulfonium salts as acid generating agents for chemical amplified pos. photoresists)
- IT 17872-98-9P, Trimethylsilyl p-toluenesulfonate 68734-62-3P, Trimethylsilyl nonafluorobutanesulfonate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of triphenylsulfonium salts as acid generating agents for chemical amplified pos. photoresists)
- IT 186769-08-4P, Tris(3-tert-butoxyphenyl)sulfonium 4-toluenesulfonate 186889-18-9P, Tris(3-tert-butoxyphenyl)sulfonium trifluoromethanesulfonate 186889-21-4P, Bis(3-tert-butoxyphenyl)phenylsulfonium trifluoromethanesulfonate 186889-24-7P, (3-tert-Butoxyphenyl)diphenylsulfonium trifluoromethanesulfonate 186889-27-0P, (3-tert-Butoxyphenyl)bis(4-dimethylaminophenyl)sulfonium trifluoromethanesulfonate 186889-30-5P, Bis(3-tert-butoxyphenyl)(4-dimethylaminophenyl)sulfonium trifluoromethanesulfonate 186889-33-8P, Bis(3-tert-butoxyphenyl)phenylsulfonium 4-toluenesulfonate 186889-35-0P, (3-tert-Butoxyphenyl)diphenylsulfonium 4-toluenesulfonate 186889-37-2P, (3-tert-Butoxyphenyl)bis(4-dimethylaminophenyl)sulfonium 4-toluenesulfonate 186889-39-4P, Bis(3-tert-butoxyphenyl)(4-

dimethylaminophenyl)sulfonium 4-toluenesulfonate 186889-41-8P,
 Tris(3-tert-butoxyphenyl)sulfonium nonafluorobutanesulfonate
 186889-43-0P, Bis(3-tert-butoxyphenyl)phenylsulfonium
 nonafluorobutanesulfonate 186889-45-2P, (3-tert-
 Butoxyphenyl)diphenylsulfonium nonafluorobutanesulfonate
 186889-47-4P, (3-tert-Butoxyphenyl)bis(4-
 dimethylaminophenyl)sulfonium nonafluorobutanesulfonate
 186889-49-6P, Bis(3-tert-butoxyphenyl)(4-
 dimethylaminophenyl)sulfonium nonafluorobutanesulfonate
 186889-52-1P, Bis(3-tert-butoxycarbonyloxyphenyl)phenylsulfonium
 nonafluorobutanesulfonate 186889-54-3P, (3-tert-
 Butoxycarbonylmethyloxyphenyl)diphenylsulfonium nonafluorobutanesulfonate
 186889-57-6P, (3-tert-Butoxycarbonyloxyphenyl)diphenylsulfonium
 nonafluorobutanesulfonate 186889-60-1P, Tris(3-tert-
 butoxycarbonylmethyloxyphenyl)sulfonium nonafluorobutanesulfonate
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)

(preparation of triphenylsulfonium salts as acid generating agents for
 chemical

amplified pos. photoresists)

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ACCESSION NUMBER: 1997:97151 CAPLUS Full-text

DOCUMENT NUMBER: 126:104070

TITLE: Preparation of (3,4-methylenedioxy- or
 3,4-isopropylidenedioxyphenyl)diphenylsulfonium salts
 as acid-generating agents and chemical
 amplification-type positive-working photoresist
 material containing them

INVENTOR(S): Oosawa, Yoichi; Watanabe, Satoshi; Shimada, Junji;
 Takemura, Katsuya; Nagura, Shigehiro; Ishihara,
 Toshinobu

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08325259	A	19961210	JP 1995-155141	19950530
JP 3601548	B2	20041215		

PRIORITY APPLN. INFO.: JP 1995-155141 19950530

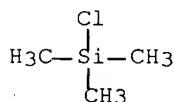
OTHER SOURCE(S): MARPAT 126:104070

ED Entered STN: 12 Feb 1997

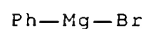
AB The title compds. (I; R1 = H, alkyl, alkoxy, dialkylamino; R2, R3 = H, alkyl;
 or R2 and R3 are bonded together to form a ring; Y = (un)substituted alkyl or
 arylsulfonate; n = 0-2; m = 1-3 and n + m = 3) are prepared A chemical
 amplification-type pos.-working photoresist material containing I is claimed.
 I can increase dissoln. contrast between exposed and unexposed part and shifts
 the maximum absorption wavelength to a longer wavelength to raise
 transmissivity at near 250 nm owing to the electro-donating effect of the
 substituents, and are suitable as components for chemical amplification-type
 pos.-working photoresist material with high resolution in microlithog. This
 photoresist possess high sensitivity for high energy rays such as far-UV,
 electron beam, and X-rays, and excellent in sensitivity, resolution, plasma
 etching resistance, and thermal resistance of a resist pattern, and may be
 used for far-UV lithog. using KrF excimer laser in manufacturing LSI. Thus,

bis[(3,4-isopropylidenedioxy)phenyl] sulfoxide was dissolved in THF and ice-cooled, followed by adding Et₃N and adding dropwise trimethylsilyl triflate, and to the resulting solution was added dropwise a Grignard reagent prepared from 1,2-(isopropylidenedioxy)-4-bromobenzene and mg metal at <10° to give, after aging the reaction mixture at 0-10° for 30 min, 25% tris[3,4-(isopropylidenedioxy)phenyl]sulfonium triflate (II). A photoresist containing II 5, 2,2-bis[4-(tert-butoxycarbonyloxy)phenyl]propane (dissoln. inhibitor) 20, and tert-butoxycarbonylated poly(4-hydroxystyrene) 70, and 1-ethoxy-2-propanol 450 part was spin-coated to 0.8 μm thickness on a silicon wafer, baked for 120 s on a hot plate, exposed by an excimer laser stepper, baked at 90° for 60 s, and developed by 2.38% aqueous tetramethylammonium hydroxide solution to give a pos. pattern with 6.5 mJ/cm² sensitivity and 0.24 μm resolution

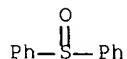
IT 75-77-4, Trimethylsilyl chloride, reactions 100-58-3
 945-51-7, Diphenyl sulfoxide 15156-67-9,
 Bis(4-dimethylaminophenyl) sulfoxide 27607-77-8, Trimethylsilyl
 triflate 68734-62-3, Trimethylsilyl nanofluorobutanesulfonate
 91735-02-3, 4-tert-Butoxyphenylmagnesium bromide
 170632-59-4, Bis(4-tert-butoxyphenyl) sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of (methylenedioxy- or
 isopropylidenedioxyphenyl)diphenylsulfon
 ium salts as acid-generating agents for chemical amplification-type
 pos.-working photoresists)
 RN 75-77-4 CAPLUS
 CN Silane, chlorotrimethyl- (CA INDEX NAME)



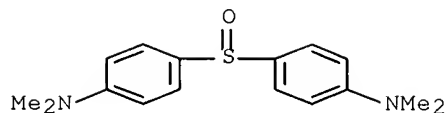
RN 100-58-3 CAPLUS
 CN Magnesium, bromophenyl- (CA INDEX NAME)



RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)

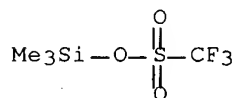


RN 15156-67-9 CAPLUS
 CN Benzenamine, 4,4'-sulfinylbis[N,N-dimethyl- (9CI) (CA INDEX NAME)



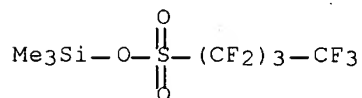
RN 27607-77-8 CAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



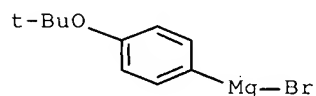
RN 68734-62-3 CAPLUS

CN 1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, trimethylsilyl ester (9CI) (CA INDEX NAME)



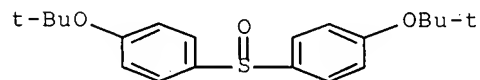
RN 91735-02-3 CAPLUS

CN Magnesium, bromo[4-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 170632-59-4 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



IT 66003-78-9P, Triphenylsulfonium triflate 138888-95-6P

186001-66-1P 186001-68-3P 186001-70-7P

186001-74-1P 186001-78-5P 186001-79-6P

186001-80-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of (methylenedioxy- or isopropylidenedioxyphenyl)diphenylsulfon

ium salts as acid-generating agents for chemical amplification-type
pos.-working photoresists)

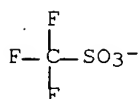
RN 66003-78-9 CAPLUS

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX
NAME)

CM 1

CRN 37181-39-8

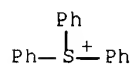
CMF C F3 O3 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



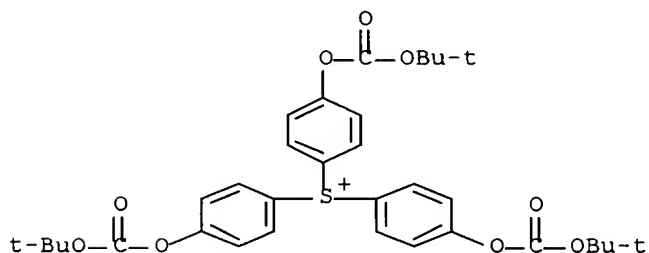
RN 138888-95-6 CAPLUS

CN Sulfonium, tris[4-[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]-, salt with
trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 120397-65-1

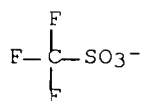
CMF C33 H39 O9 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

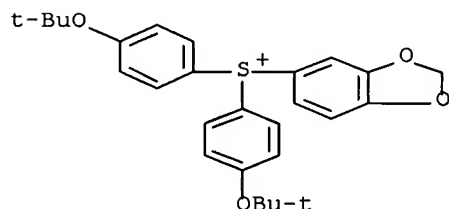


RN 186001-66-1 CAPLUS
 CN Sulfonium, 1,3-benzodioxol-5-ylbis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-65-0

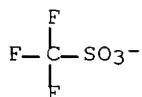
CMF C27 H31 O4 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

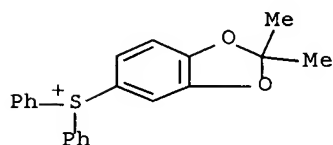


RN 186001-68-3 CAPLUS
 CN Sulfonium, (2,2-dimethyl-1,3-benzodioxol-5-yl)diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-67-2

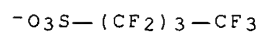
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



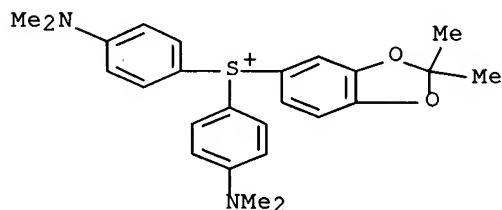
RN 186001-70-7 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl](2,2-dimethyl-1,3-benzodioxol-5-yl)-
 , salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-69-4

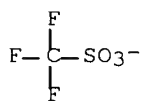
CMF C25 H29 N2 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



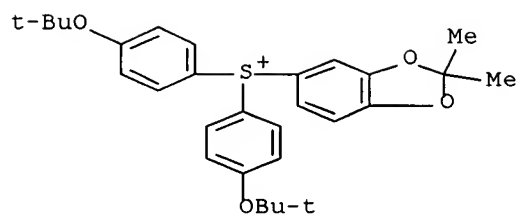
RN 186001-74-1 CAPLUS

CN Sulfonium, (2,2-dimethyl-1,3-benzodioxol-5-yl)bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1)
 (9CI) (CA INDEX NAME)

CM 1

CRN 186001-73-0

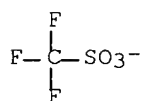
CMF C29 H35 O4 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



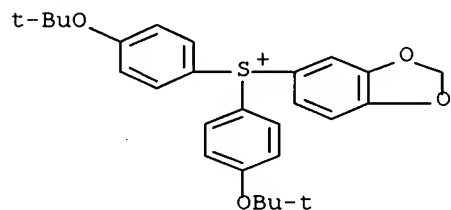
RN 186001-78-5 CAPLUS

CN Sulfonium, 1,3-benzodioxol-5-ylbis[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-65-0

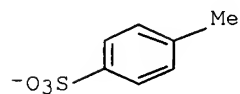
CMF C27 H31 O4 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



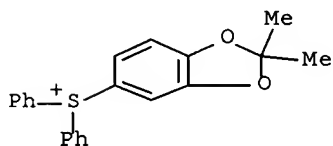
RN 186001-79-6 CAPLUS

CN Sulfonium, (2,2-dimethyl-1,3-benzodioxol-5-yl)diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-67-2

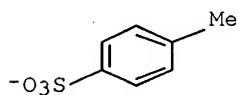
CMF C21 H19 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



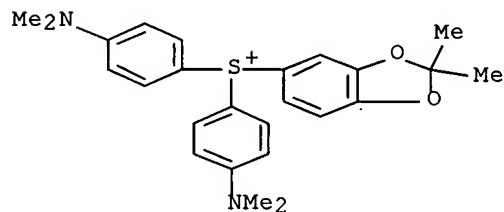
RN 186001-80-9 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl](2,2-dimethyl-1,3-benzodioxol-5-yl)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 186001-69-4

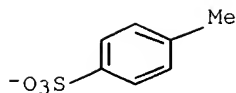
CMF C25 H29 N2 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



IC ICM C07D317-46
ICS C07D317-62; G03F007-004; H01L021-027

CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 74

IT 75-77-4, Trimethylsilyl chloride, reactions 100-58-3
104-15-4, p-Toluenesulfonic acid, reactions 945-51-7, Diphenyl
sulfoxide 2635-13-4 15156-67-9, Bis(4-dimethylaminophenyl)
sulfoxide 17872-98-9, Trimethylsilyl p-toluenesulfonate
27607-77-8, Trimethylsilyl triflate 68734-62-3,
Trimethylsilyl nanofluorobutanesulfonate 73790-19-9 91735-02-3
, 4-tert-Butoxyphenylmagnesium bromide 170632-59-4,
Bis(4-tert-butoxyphenyl) sulfoxide 186001-82-1, Bis(3,4-
isopropylidenedioxyphenyl) sulfoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (methylenedioxy- or
isopropylidenedioxyphenyl)diphenylsulfon
ium salts as acid-generating agents for chemical amplification-type
pos.-working photoresists)

IT 66003-78-9P, Triphenylsulfonium triflate 138888-95-6P
186001-64-9P 186001-66-1P 186001-68-3P
186001-70-7P 186001-72-9P 186001-74-1P 186001-76-3P
186001-77-4P 186001-78-5P 186001-79-6P
186001-80-9P 186001-81-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(preparation of (methylenedioxy- or
isopropylidenedioxyphenyl)diphenylsulfon
ium salts as acid-generating agents for chemical amplification-type
pos.-working photoresists)

L53 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:67170 CAPLUS Full-text

DOCUMENT NUMBER: 126:82221

TITLE: Chemically amplified positive resist material
containing sulfonium salt

INVENTOR(S): Oosawa, Yoichi; Watanabe, Satoshi; Ishihara,
Toshinobu; Tanaka, Haruyori; Kawai, Yoshio; Nakamura,
Jiro

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon
Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

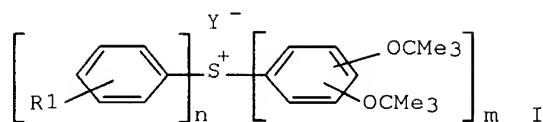
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08248626	A	19960927	JP 1995-74629	19950307
JP 3399141	B2	20030421		

PRIORITY APPLN. INFO.: JP 1995-74629 19950307

ED Entered STN: 30 Jan 1997

GI



AB The resist material contains a sulfonium salt I (R1 = H, alkyl, alkoxy, dialkylamino; Y = trifluoromethanesulfonate, p-toluenesulfonate; n = 0-2, m = 1-3, n + m = 3). The resist material contains (A) an organic solvent, (B) an alkali-soluble resin, (C) a dissoln. inhibitor having an acid-unstable group, (D) the sulfonium salt, and (E) an acid generating agent, preferably an onium salt R₂nMY [R₂ = (substituted) aromatic group; M = sulfonium, iodonium; Y = same as above; n = 2, 3]. The resist material free of C and/or E is also claimed. The alkali-soluble resin may be a polyhydroxystyrene with weight-average mol. weight 5000-100,000 whose H in OH are partially substituted with an acid-unstable group.

IT 184291-51-8P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acid generating agent; chemical amplified pos. resist material containing sulfonium salt)

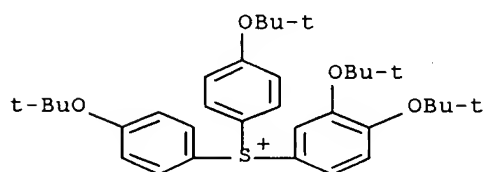
RN 184291-51-8 CAPLUS

CN Sulfonium, [3,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-50-7

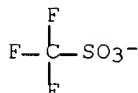
CMF C34 H47 O4 S



CM 2

CRN 37181-39-8

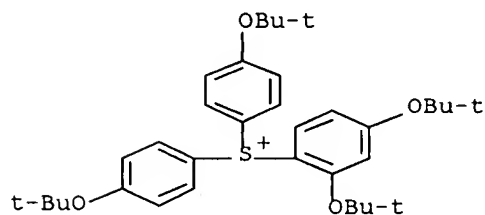
CMF C F3 O3 S



IT 184291-53-0P 184291-55-2P 184291-57-4P
 184291-59-6P 184291-61-0P 184291-66-5P
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (chemical amplified pos. resist material containing sulfonium salt)
 RN 184291-53-0 CAPLUS
 CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

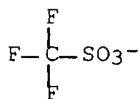
CM 1

CRN 184291-52-9
 CMF C34 H47 O4 S



CM 2

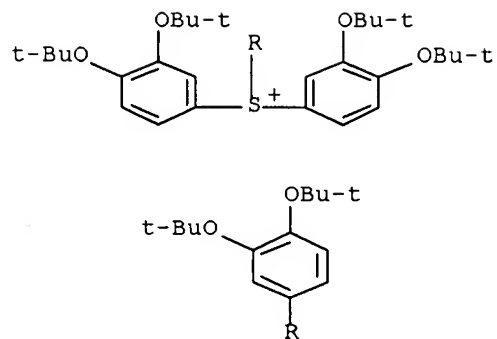
CRN 37181-39-8
 CMF C F3 O3 S



RN 184291-55-2 CAPLUS
 CN Sulfonium, tris[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

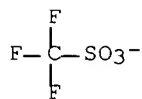
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 CMF C42 H63 O6 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



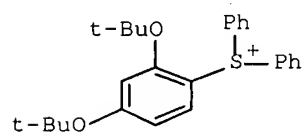
RN 184291-57-4 CAPLUS

CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-56-3

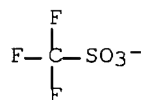
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

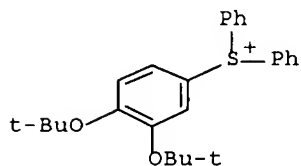
CMF C F3 O3 S



RN 184291-59-6 CAPLUS
 CN Sulfonium, [3,4-bis(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

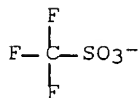
CM 1

CRN 184291-58-5
 CMF C26 H31 O2 S



CM 2

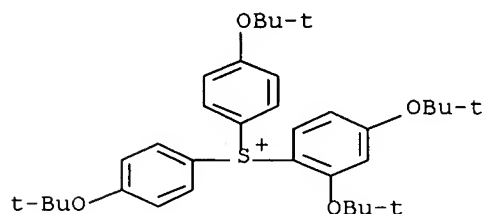
CRN 37181-39-8
 CMF C F3 O3 S



RN 184291-61-0 CAPLUS
 CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

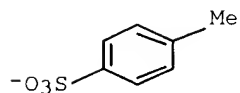
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 CMF C34 H47 O4 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



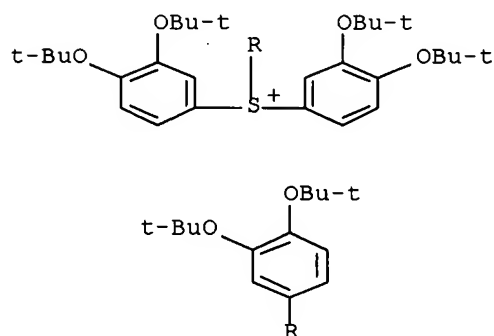
RN 184291-66-5 CAPLUS

CN Sulfonium, tris[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-54-1

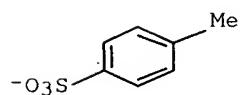
CMF C42 H63 O6 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



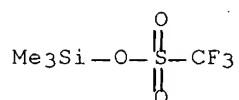
IT 27607-77-8, Trimethylsilyl triflate 170632-59-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(chemical amplified pos. resist material containing sulfonium salt)

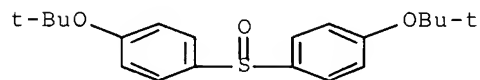
RN 27607-77-8 CAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 170632-59-4 CAPLUS

CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 184291-51-8P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid generating agent; chemical amplified pos. resist material containing sulfonium salt)

IT 184291-53-0P 184291-55-2P 184291-57-4P

184291-59-6P 184291-61-0P 184291-66-5P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified pos. resist material containing sulfonium salt)

IT 27607-77-8, Trimethylsilyl triflate 170632-59-4

184291-69-8 184291-70-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(chemical amplified pos. resist material containing sulfonium salt)

L53 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:748363 CAPLUS Full-text

DOCUMENT NUMBER: 126:31153

TITLE: Preparation of phenylsulfonium salts as acid generating agents for highly sensitive positive photoresist materials

INVENTOR(S): Oosawa, Yoichi; Watanabe, Satoshi; Shimada, Junji; Takemura, Katsuya; Ishihara, Toshinobu

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

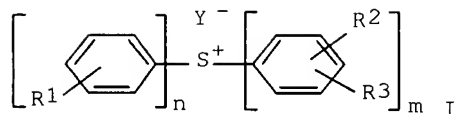
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245566	A	19960924	JP 1995-84424	19950307
PRIORITY APPLN. INFO.:			JP 1995-84424	19950307

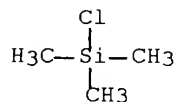
OTHER SOURCE(S): MARPAT 126:31153

ED Entered STN: 21 Dec 1996

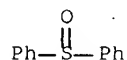
GI



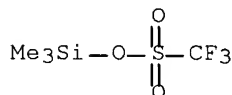
- AB The title compds. (I; R1 = H, alkyl, alkoxy, dialkylamino; R2, R3 = Me3CO; Y = CF3SO3, p-TsO; n = 0-2; m = 1-3; n + m = 3) are prepared I are useful as components for chemical amplification-type photoresist materials in micro-process technic. Thus, bis(4-tert-butoxyphenyl) sulfoxide was reacted with CF3SO3SiMe3 in the presence of Et3N, and then reacted with 1,2-di-tert-butoxy-4-chlorobenzene and Mg to give 35% I (R1 = 4'-Me3CO, R2 = 3-Me3CO, R3 = 4-Me3CO, Y = CF3SO3, n = 2, m = 1) (II). II showed sensitivity optimum exposure of 5.5 mJ/cm2.
- IT 75-77-4, Trimethylsilyl chloride, reactions 945-51-7, Diphenyl sulfoxide 27607-77-8, Trimethylsilyl triflate 170632-59-4 184291-72-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of phenylsulsonium salts as acid generating agents for highly sensitive pos. photoresist materials)
- RN 75-77-4 CAPLUS
- CN Silane, chlorotrimethyl- (CA INDEX NAME)



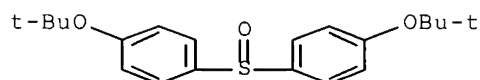
- RN 945-51-7 CAPLUS
- CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



- RN 27607-77-8 CAPLUS
- CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)

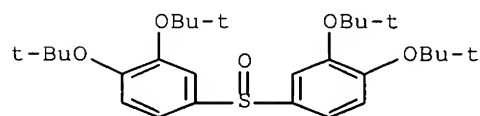


- RN 170632-59-4 CAPLUS
- CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



RN 184291-72-3 CAPLUS

CN Benzene, 1,1'-sulfinylbis[3,4-bis(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



IT 184291-51-8P 184291-53-0P 184291-55-2P

184291-57-4P 184291-59-6P 184291-61-0P

184291-63-2P 184291-66-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of phenylsulfonium salts as acid generating agents for highly sensitive pos. photoresist materials)

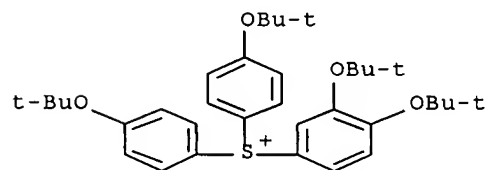
RN 184291-51-8 CAPLUS

CN Sulfonium, [3,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-50-7

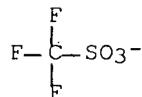
CMF C34 H47 O4 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

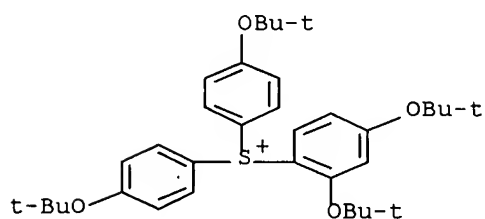


RN 184291-53-0 CAPLUS
 CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-52-9

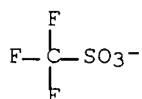
CMF C34 H47 O4 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

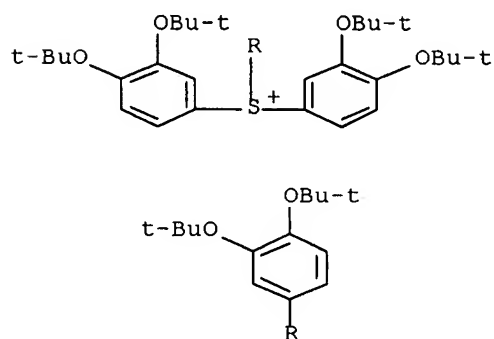


RN 184291-55-2 CAPLUS
 CN Sulfonium, tris[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-54-1

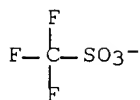
CMF C42 H63 O6 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



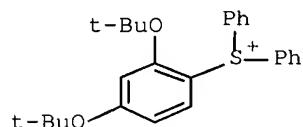
RN 184291-57-4 CAPLUS

CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-56-3

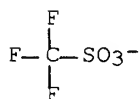
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



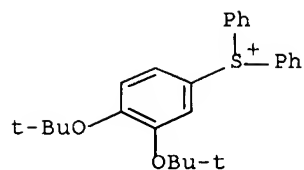
RN 184291-59-6 CAPLUS

CN Sulfonium, [3,4-bis(1,1-dimethylethoxy)phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-58-5

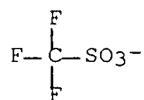
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



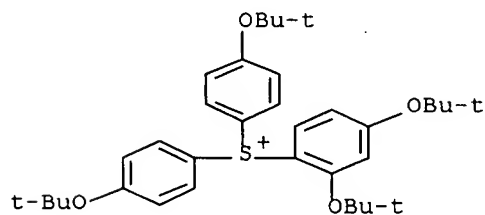
RN 184291-61-0 CAPLUS

CN Sulfonium, [2,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 184291-52-9

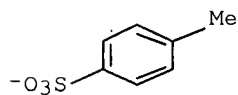
CMF C34 H47 O4 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



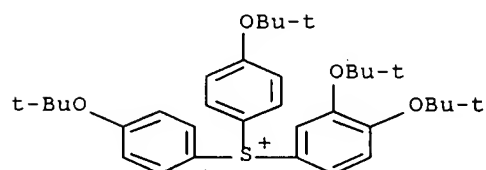
RN 184291-63-2 CAPLUS

CN Sulfonium, [3,4-bis(1,1-dimethylethoxy)phenyl]bis[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 184291-50-7

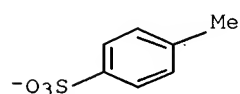
CMF C34 H47 O4 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



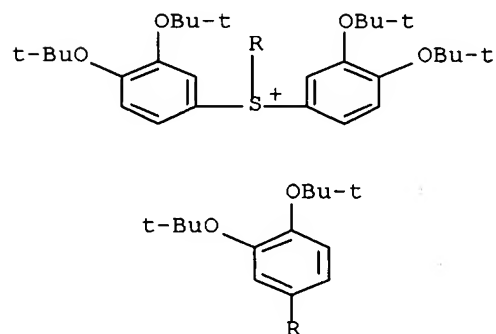
RN 184291-66-5 CAPLUS

CN Sulfonium, tris[3,4-bis(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

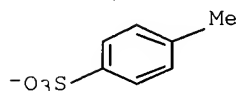
CRN 184291-54-1

CMF C42 H63 O6 S



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



IC ICM C07C381-12
ICS G03F007-004; G03F007-039
CC 25-9 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 74
IT 75-77-4, Trimethylsilyl chloride, reactions 104-15-4,
p-Toluenesulfonic acid, reactions 945-51-7, Diphenyl sulfoxide
27607-77-8, Trimethylsilyl triflate 170632-59-4
184291-69-8, 1,2-Di-tert-butoxy-4-chlorobenzene 184291-70-1,
4-Bromo-1,3-Di-tert-butoxybenzene 184291-72-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of phenylsulfonium salts as acid generating agents for highly
sensitive pos. photoresist materials)
IT 184291-51-8P 184291-53-0P 184291-55-2P
184291-57-4P 184291-59-6P 184291-61-0P
184291-63-2P 184291-66-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(preparation of phenylsulfonium salts as acid generating agents for highly
sensitive pos. photoresist materials)

L53 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:524232 CAPLUS Full-text

DOCUMENT NUMBER: 125:247486

TITLE: Reaction of triphenylsulfonium salts with
organolithium reagents

AUTHOR(S): Oae, S.; Ishihara, H.; Yoshihara, M.

CORPORATE SOURCE: Inst. Heteroat. Chem., Osaka, 587, Japan

SOURCE: Zhurnal Organicheskoi Khimii (1996), 32(2), 282-286
CODEN: ZORKAE; ISSN: 0514-7492

PUBLISHER: Nauka

DOCUMENT TYPE: Journal

LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 125:247486

ED Entered STN: 31 Aug 1996

AB Reactions of $\text{Ph}_3\text{S}^+ \text{CF}_3\text{SO}_3^-$ with phenyl-, 2-thienyl-, 2-pyridyl-, 2-quinolyl-,
2-furyl-, and 2-pyrimidyllithium gave biphenyl, 2-phenylthiophene, 2-
phenylpyridine, 2-phenylquinoline, 2-phenylfuran, and 4-phenylpyrimidine,
resp. Ph_2S was also formed in these reactions.

IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation and reaction with heteroaryllithium compds.)

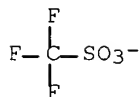
RN 66003-78-9 CAPLUS

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX
NAME)

CM 1

CRN 37181-39-8

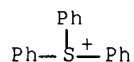
CMF C F3 O3 S



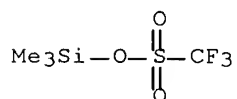
CM 2

CRN 18393-55-0

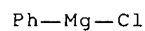
CMF C18 H15 S



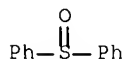
IT 27607-77-8, Trimethylsilyl triflate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with di-Ph sulfoxide and phenylmagnesium chloride)
 RN 27607-77-8 CAPLUS
 CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



IT 100-59-4, Phenylmagnesium chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with di-Ph sulfoxide and trimethylsilyl triflate)
 RN 100-59-4 CAPLUS
 CN Magnesium, chlorophenyl- (CA INDEX NAME)



IT 945-51-7, Diphenyl sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with trimethylsilyl triflate and phenylmagnesium chloride)
 RN 945-51-7 CAPLUS
 CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



CC 27-1 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 25, 28
 IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction with heteroaryllithium compds.)
 IT 27607-77-8, Trimethylsilyl triflate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with di-Ph sulfoxide and phenylmagnesium chloride)
 IT 100-59-4, Phenylmagnesium chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with di-Ph sulfoxide and trimethylsilyl triflate)
 IT 945-51-7, Diphenyl sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with trimethylsilyl triflate and phenylmagnesium chloride)

L53 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:169329 CAPLUS Full-text

DOCUMENT NUMBER: 124:274529

TITLE: Chemical amplification positive-working resist materials

INVENTOR(S): Watanabe, Satoshi; Oikawa, Katsuyuki; Ishihara, Toshinobu; Tanaka, Haruyori; Matsuda, Korehito; Kawai, Yoshio

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

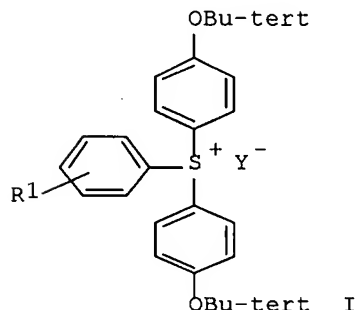
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07333834	A	19951222	JP 1994-152655	19940610
JP 2964874	B2	19991018		
US 5624787	A	19970429	US 1995-466690	19950606
TW 390973	B	20000521	TW 1995-84105763	19950607
KR 212928	B1	19990802	KR 1995-15295	19950610
PRIORITY APPLN. INFO.:			JP 1994-152655	A 19940610

OTHER SOURCE(S): MARPAT 124:274529

ED Entered STN: 22 Mar 1996

GI



AB The title materials contain a sulfonium salt I (R1 = H, alkyl, alkoxy; Y- = CF₃SO₃⁻, p-MeC₆H₄SO₃⁻) and a N-containing compound. The materials show high sensitivity toward KrF excimer lasers and resistance to plasma etching and provide high-resolution patterns with good thermal resistance. Thus, a resist comprised I (R1 = H, Y- = CF₃SO₃⁻), N-methylpyrrolidone, an alkali-soluble resin, and a dissoln. inhibitor.

IT 157089-24-2P 160659-39-2P 161453-47-0P
170014-77-4P

RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acid generator; chemical amplification-type pos.-working photoresist containing sulfonium salt and nitrogen-containing compound)

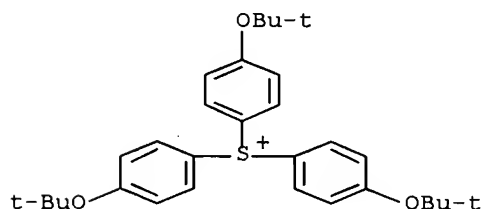
RN 157089-24-2 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 137455-55-1

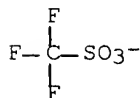
CMF C30 H39 O3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



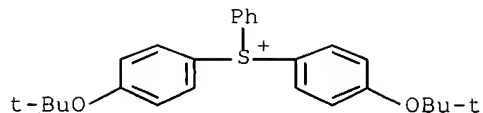
RN 160659-39-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 160659-38-1

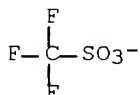
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



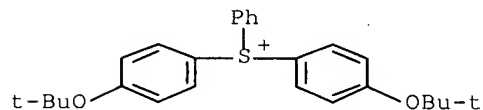
RN 161453-47-0 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 160659-38-1

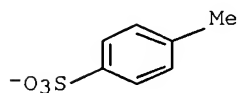
CMF C26 H31 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



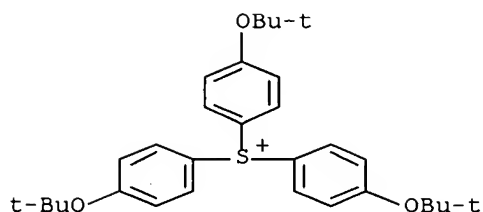
RN 170014-77-4 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 137455-55-1

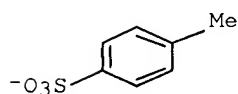
CMF C30 H39 O3 S



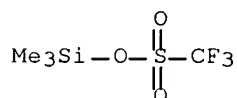
CM 2

CRN 16722-51-3

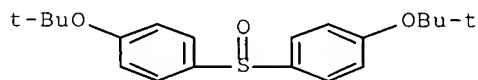
CMF C7 H7 O3 S



IT 27607-77-8, Trimethylsilyl trifluoromethanesulfonate
 170632-59-4, Bis(p-tert-butoxyphenyl)sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of sulfonium salt acid generator)
 RN 27607-77-8 CAPLUS
 CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 170632-59-4 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03F007-039; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 157089-24-2P 160659-39-2P 161453-47-0P
 170014-77-4P
 RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acid generator; chemical amplification-type pos.-working photoresist containing sulfonium salt and nitrogen-containing compound)

IT 17872-98-9, (Trimethylsilyl) p-toluenesulfonate 27607-77-8,
Trimethylsilyl trifluoromethanesulfonate 170632-59-4,
Bis(p-tert-butoxyphenyl)sulfoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of sulfonium salt acid generator)

L53 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:934008 CAPLUS Full-text

DOCUMENT NUMBER: 123:325759

TITLE: Sulfonium salt and resist composition

INVENTOR(S): Watanabe, Satoshi; Shimada, Junji; Ohsawa, Youichi;
Takemura, Katsuya; Ishihara, Toshinobu; Maruyama,
Kazumasa

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 667338	A1	19950816	EP 1995-100997	19950125
EP 667338	B1	19980107		
R: CH, DE, FR, LI, NL				
JP 07252214	A	19951003	JP 1995-19844	19950112
JP 2874579	B2	19990324		
KR 230971	B1	19991115	KR 1995-1035	19950121
US 5569784	A	19961029	US 1995-379987	19950127
TW 482942	B	20020411	TW 1995-84102674	19950320
			JP 1994-26170	A 19940128

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 123:325759

ED Entered STN: 22 Nov 1995

AB A sulfonium salt is represented as S+R1R2R3.-O3SCF3 (R1-3 = aromatic group). A chemical amplified, pos. resist composition comprising the sulfonium salt as well as an alkali-soluble resin and a dissoln. inhibitor in an organic solvent has solved the PED (post-exposure delay) problem.

IT 66003-78-9P, Triphenylsulfonium triflate 157089-24-2P
170632-61-8P 170632-63-0P 170632-65-2P
170632-67-4P 170632-69-6P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP
(Preparation); USES (Uses)
(photoacid generator)

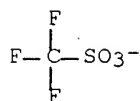
RN 66003-78-9 CAPLUS

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 37181-39-8

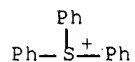
CMF C F3 O3 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



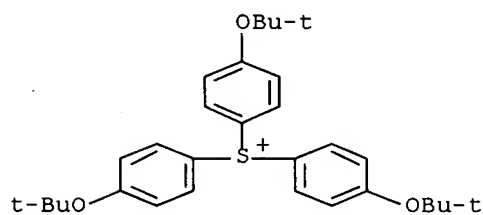
RN 157089-24-2 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 137455-55-1

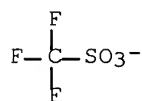
CMF C30 H39 O3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

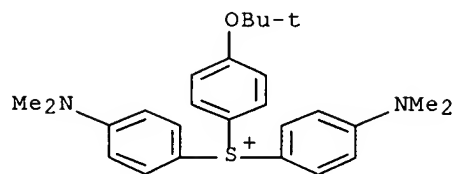


RN 170632-61-8 CAPLUS

CN Sulfonium, bis[4-(dimethylamino)phenyl][4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

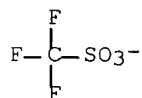
CM 1

CRN 170632-60-7
CMF C26 H33 N2 O S



CM 2

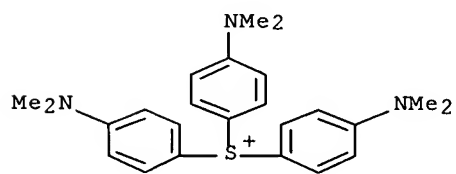
CRN 37181-39-8
CMF C F3 O3 S



RN 170632-63-0 CAPLUS
CN Sulfonium, tris[4-(dimethylamino)phenyl]-, salt with
trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

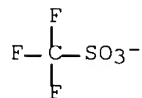
CM 1

CRN 170632-62-9
CMF C24 H30 N3 S



CM 2

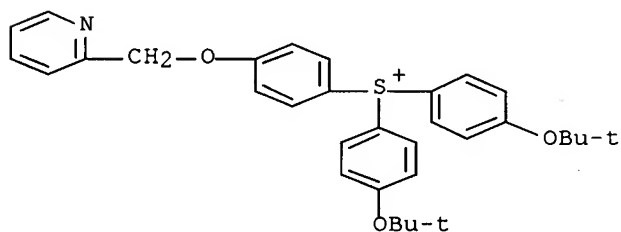
CRN 37181-39-8
CMF C F3 O3 S



RN 170632-65-2 CAPLUS
 CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-(2-pyridinylmethoxy)phenyl]-
 , salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

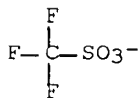
CM 1

CRN 170632-64-1
 CMF C32 H36 N O3 S



CM 2

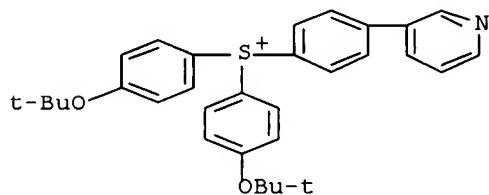
CRN 37181-39-8
 CMF C F3 O3 S



RN 170632-67-4 CAPLUS
 CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl][4-(3-pyridinyl)phenyl]-, salt
 with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

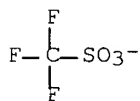
CRN 170632-66-3
 CMF C31 H34 N O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



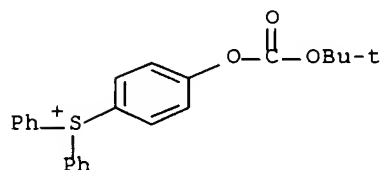
RN 170632-69-6 CAPLUS

CN Sulfonium, [4-[[[1,1-dimethylethoxy)carbonyl]oxy]phenyl]diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 170632-68-5

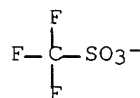
CMF C23 H23 O3 S



CM 2

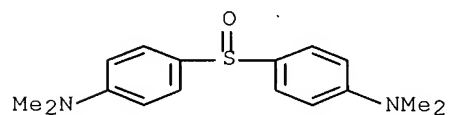
CRN 37181-39-8

CMF C F3 O3 S

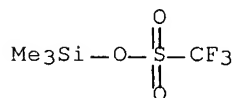
IT 15156-67-9 27607-77-8, Trimethylsilyltriflate
170632-59-4RL: RCT (Reactant); RACT (Reactant or reagent)
(photoacid generator from)

RN 15156-67-9 CAPLUS

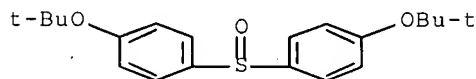
CN Benzenamine, 4,4'-sulfinylbis[N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 27607-77-8 CAPLUS
 CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 170632-59-4 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-(1,1-dimethylethoxy)- (9CI) (CA INDEX NAME)

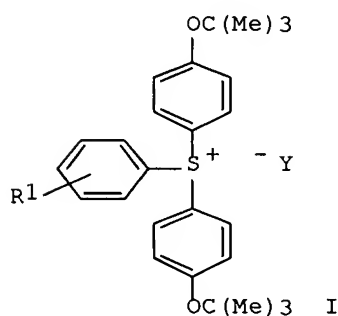


IC ICM C07C381-12
 ICS G03F007-004
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 66003-78-9P, Triphenylsulfonium triflate 157089-24-2P
 170632-61-8P 170632-63-0P 170632-65-2P
 170632-67-4P 170632-69-6P
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (photoacid generator)
 IT 586-77-6, 4-Bromo-N,N-dimethylaniline 15156-67-9 18995-35-2
 27607-77-8, Trimethylsilyltriflate 170632-59-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photoacid generator from)

L53 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1995:907693 CAPLUS Full-text
 DOCUMENT NUMBER: 123:301551
 TITLE: Sulfonium salt and chemically amplified positive resist composition
 INVENTOR(S): Satoshi, Watanabe; Youichi, Oshawa; Toshinobu, Ishihara; Kazumasa, Maruyama; Yoshihumni, Takeda; Junji, Shimada; Katsuya, Takemura; Yagihashi, Jujio
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 27 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 665220	A1	19950802	EP 1995-100913	19950124
EP 665220	B1	19990407		
R: CH, DE, FR, LI, NL				

JP 07215930	A	19950815	JP 1994-26171	19940128
JP 2896629	B2	19990531		
TW 389849	B	20000511	TW 1994-83108833	19940923
JP 07324069	A	19951212	JP 1994-317626	19941128
JP 2827938	B2	19981125		
US 5633409	A	19970527	US 1995-379986	19950127
US 5691112	A	19971125	US 1996-762861	19961210
PRIORITY APPLN. INFO.:			JP 1994-26171	A 19940128
			JP 1994-82359	A 19940329
			JP 1994-95560	A 19940408
			JP 1994-317626	A 19941128
			US 1995-379986	A3 19950127
OTHER SOURCE(S):	MARPAT 123:301551			
ED	Entered STN: 10 Nov 1995			
GI				



AB The title sulfonium salt is represented by I (R1 = H, alkyl, alkoxy; Y = trifluoromethanesulfonate, p-toluenesulfonate). The above salt is prepared from bis(p-tert-butoxyphenyl)sulfoxide. A chemical amplified pos. resist composition which contains the sulfonium salt as a photo-acid generator is highly sensitive to deep-UV rays, electron beams and x-rays, can be developed with alkaline aqueous solution to form a pattern, and is thus suitable for use in a fine patterning technique.

IT 157089-24-2P, Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) 160659-39-2P, Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) 161453-47-0P, Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) 170014-76-3P 170014-77-4P 170014-78-5P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP. (Preparation); USES (Uses) (photoacid generator)

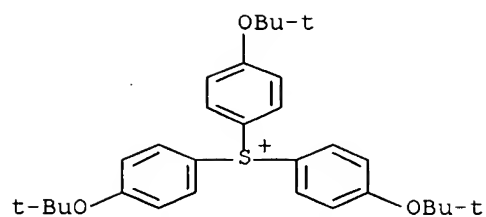
RN 157089-24-2 CAPLUS

CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 137455-55-1

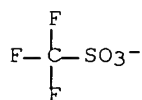
CMF C30 H39 O3 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



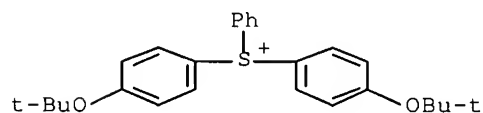
RN 160659-39-2 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 160659-38-1

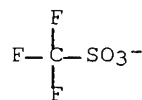
CMF C26 H31 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



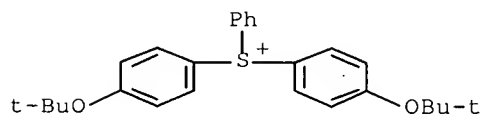
RN 161453-47-0 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 160659-38-1

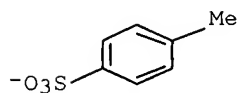
CMF C26 H31 O2 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



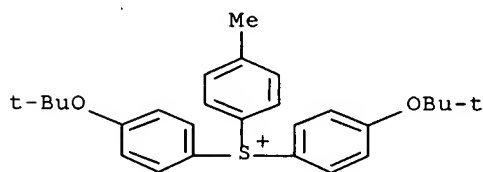
RN 170014-76-3 CAPLUS

CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl](4-methylphenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 170014-75-2

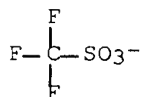
CMF C27 H33 O2 S



CM 2

CRN 37181-39-8

CMF C F3 O3 S

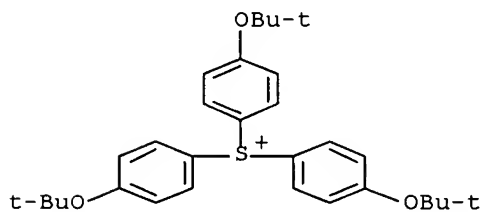


RN 170014-77-4 CAPLUS
 CN Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 137455-55-1

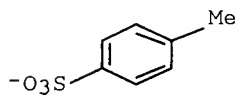
CMF C30 H39 O3 S



CM 2

CRN 16722-51-3

CMF C7 H7 O3 S

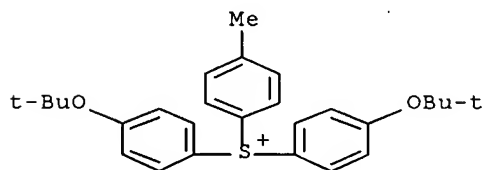


RN 170014-78-5 CAPLUS
 CN Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl](4-methylphenyl)-, salt with
 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 170014-75-2

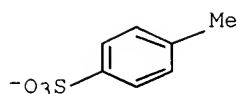
CMF C27 H33 O2 S



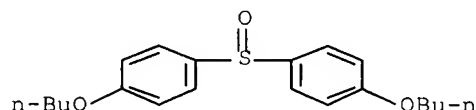
CM 2

CRN 16722-51-3

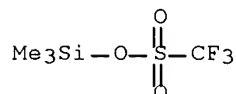
CMF C7 H7 O3 S



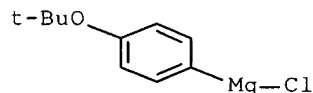
IT 91815-60-0P, Benzene, 1,1'-sulfinylbis[4-butoxy-
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (photoacid generator from)
 RN 91815-60-0 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-butoxy- (9CI) (CA INDEX NAME)



IT 27607-77-8, Trimethylsilyl trifluoromethanesulfonate
 132098-25-0, 4-tert-Butoxyphenylmagnesium chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photoacid generator from)
 RN 27607-77-8 CAPLUS
 CN Methanesulfonic acid, 1,1,1-trifluoro-, trimethylsilyl ester (CA INDEX NAME)



RN 132098-25-0 CAPLUS
 CN Magnesium, chloro[4-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)



IC ICM C07C381-12
 ICS C07C317-22; G03F007-039
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 157089-24-2P, Sulfonium, tris[4-(1,1-dimethylethoxy)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) 160659-39-2P, Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) 161453-47-0P, Sulfonium, bis[4-(1,1-dimethylethoxy)phenyl]phenyl-, salt with 4-methylbenzenesulfonic acid (1:1) 170014-76-3P
 170014-77-4P 170014-78-5P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photoacid generator)

IT 91815-60-0P, Benzene, 1,1'-sulfinylbis[4-butoxy-
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)
(photoacid generator from)

IT 106-43-4, 4-Chlorotoluene 108-90-7, Chlorobenzene, reactions
7719-09-7, Thionyl chloride 17872-98-9, (Trimethylsilyl)p-
toluenesulfonate 27607-77-8, Trimethylsilyl
trifluoromethanesulfonate 132098-25-0, 4-tert-
Butoxyphenylmagnesium chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(photoacid generator from)

L53 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:81079 CAPLUS Full-text

DOCUMENT NUMBER: 124:232222

TITLE: Reaction of triphenylsulfonium salt with
hetaryllithium reagents

AUTHOR(S): Oae, Shigeru; Ishihara, Hiroyuki; Yoshihara, Masakuni

CORPORATE SOURCE: Inst. Heteroatom Chem., Osaka, 587, Japan

SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1995), (8),
1053-8

CODEN: KGSSAQ; ISSN: 0132-6244

PUBLISHER: Latviiskii Institut Organicheskogo Sinteza

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:232222

ED Entered STN: 07 Feb 1996

AB The reaction of triphenylsulfonium trifluoromethanesulfonate (I) with various
nucleophilic organolithium reagents gave ligand coupling products and the
corresponding diaryl or di-heteroaryl sulfides. Moreover, ligand exchange
reaction did not give any noticeable product in each reaction. Thus, reacting
I with 2-thienyllithium gave 2-phenylthiophene and di-Ph sulfide. Therefore,
it was found that only the ligand coupling reaction proceeds in this reaction
system.

IT 100-59-4, Phenylmagnesium chloride 945-51-7, Phenyl
sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of triphenylsulfonium salt with hetaryllithiums)

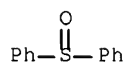
RN 100-59-4 CAPLUS

CN Magnesium, chlorophenyl- (CA INDEX NAME)

Ph—Mg—Cl

RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)



IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(coupling of triphenylsulfonium salt with hetaryllithiums)

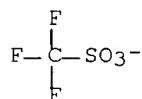
RN 66003-78-9 CAPLUS

CN Sulfonium, triphenyl-, 1,1,1-trifluoromethanesulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 37181-39-8

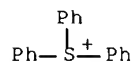
CMF C F3 O3 S



CM 2

CRN 18393-55-0

CMF C18 H15 S



CC 27-17 (Heterocyclic Compounds (One Hetero Atom))

IT 91-22-5, Quinoline, reactions 100-59-4, Phenylmagnesium chloride
 109-04-6, 2-Bromopyridine 109-72-8, n-Butyllithium, reactions
 110-00-9, Furan 289-95-2, Pyrimidine 945-51-7, Phenyl
 sulfoxide 1003-09-4, 2-Bromothiophene

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of triphenylsulfonium salt with hetaryllithiums)

IT 66003-78-9P, Triphenylsulfonium trifluoromethanesulfonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(coupling of triphenylsulfonium salt with hetaryllithiums)

L53 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:780253 CAPLUS Full-text

DOCUMENT NUMBER: 123:287258

TITLE: Polymeric sulfonium salts and their preparation

INVENTOR(S): Wright, Bradford B.; Farooq, Omar; Devoe, Robert J.

PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9425507	A1	19941110	WO 1994-US2731	19940314

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

US 5380923

A

19950110

US 1993-55031

19930429

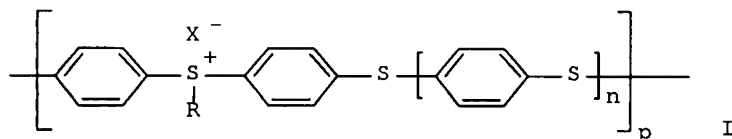
PRIORITY APPLN. INFO.:

US 1993-55031

A 19930429

ED Entered STN: 08 Sep 1995

GI



AB Polymeric triarylsulfonium salts having a repeating structural unit I [R = (un)substituted aryl; X- = a non-nucleophilic anion; n ≥ 0; p ≥ 2] may be prepared by combining an arylbis(p-fluorophenyl)sulfonium salt with a bis(trimethylsilylated) dithiol in a polar aprotic solvent. The I are capable of initiating photopolymerization of polyacrylate monomers.

IT 167401-85-6P 167401-86-7P 167401-87-8P

167401-91-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of monomers for polymeric sulfonium salts)

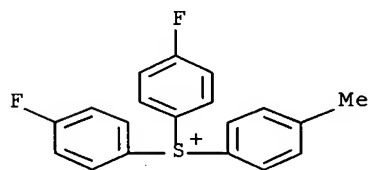
RN 167401-85-6 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, methanesulfonate (9CI)
(CA INDEX NAME)

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CRN 167401-84-5

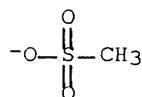
CMF C19 H15 F2 S



CM 2

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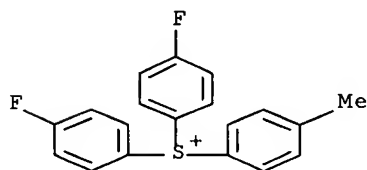
CMF C H3 O3 S



RN 167401-86-7 CAPLUS
 CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, salt with
 trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

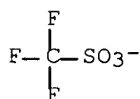
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CM 2

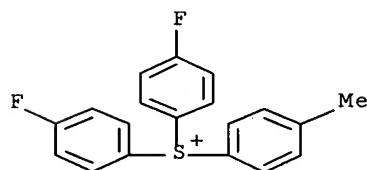
CRN 37181-39-8
 CMF C F3 O3 S



RN 167401-87-8 CAPLUS
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 (9CI) (CA INDEX NAME)

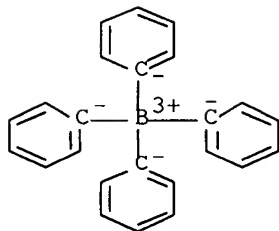
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CM 2

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 CCI CCS

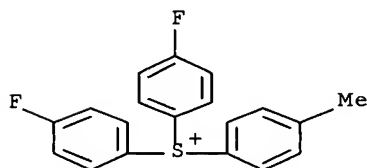


RN 167401-91-4 CAPLUS
 CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, phosphate (1:1) (9CI)
 (CA INDEX NAME)

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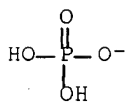
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CM 2

CRN 14066-20-7

CMF H2 O4 P



IT 167401-88-9P 167401-89-0P 167401-90-3P
 169836-80-0P 169836-81-1P 169836-83-3P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of polymeric sulfonium salts)
 RN 167401-88-9 CAPLUS
 CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, salt with
 trifluoromethanesulfonic acid (1:1), polymer with hexamethyldisilathiane
 (9CI) (CA INDEX NAME)

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CRN 3385-94-2

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Me₃Si—S—SiMe₃

CM . 2

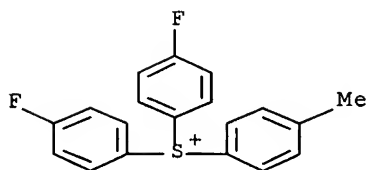
CRN 167401-86-7

CMF C19 H15 F2 S . C F3 O3 S

CM 3

CRN 167401-84-5

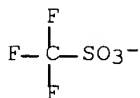
CMF C19 H15 F2 S



CM 4

CRN 37181-39-8

CMF C F3 O3 S



RN 167401-89-0 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, tetraphenylborate(1-), polymer with hexamethyldisilathiane (9CI) (CA INDEX NAME)

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CRN 3385-94-2

CMF C6 H18 S Si2

Me₃Si—S—SiMe₃

CM 2

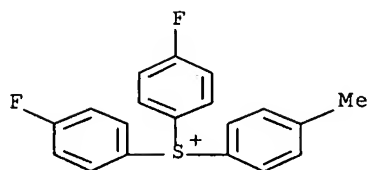
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CM 3

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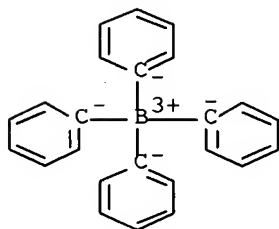


CM 4

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



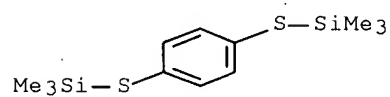
RN 167401-90-3 CAPLUS

CN Sulfonium, bis(4-fluorophenyl)(4-methylphenyl)-, salt with
trifluoromethanesulfonic acid (1:1), polymer with [1,4-
phenylenebis(thio)]bis[trimethylsilane] (9CI) (CA INDEX NAME)

CM 1

CRN 69209-21-8

CMF C12 H22 S2 Si2



CM 2

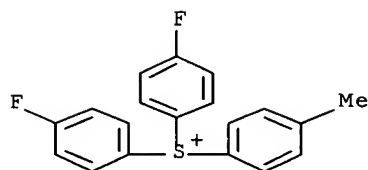
CRN 167401-86-7

CMF C19 H15 F2 S . C F3 O3 S

CM 3

CRN 167401-84-5

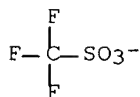
CMF C19 H15 F2 S



CM 4

CRN 37181-39-8

CMF C F3 O3 S



RN 169836-80-0 CAPLUS

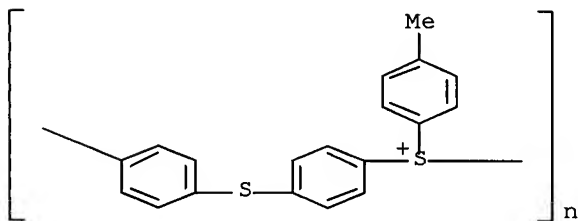
CN Poly[[(4-methylphenyl)sulfoniumylidene]-1,4-phenylenethio-1,4-phenylene salt with trifluoromethanesulfonic acid (1:1)] (9CI) (CA INDEX NAME)

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CRN 169836-79-7

CMF (C19 H15 S2)n

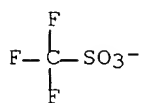
CCI PMS



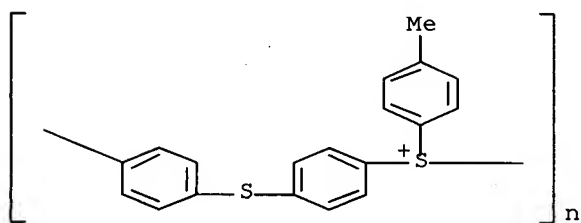
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CRN 37181-39-8

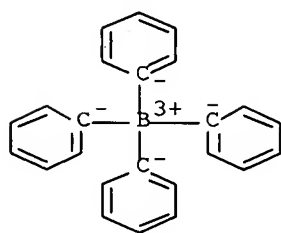
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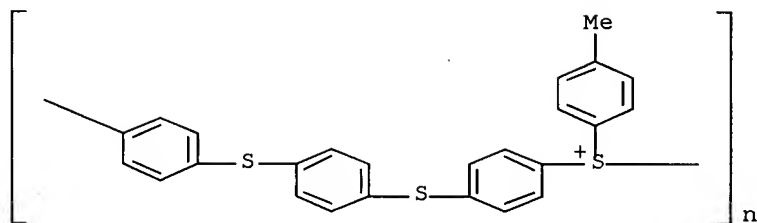
RN 169836-81-1 CAPLUS
 CN Poly[[(4-methylphenyl)sulfoniumylidene]-1,4-phenylenethio-1,4-phenylene
 tetraphenylborate(1-)] (9CI) (CA INDEX NAME)
 CM 1
 CRN 169836-79-7
 CMF (C19 H15 S2)n
 CCI PMS



CM 2
 CRN 4358-26-3
 CMF C24 H20 B
 CCI CCS



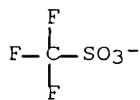
RN 169836-83-3 CAPLUS
 CN Poly[[(4-methylphenyl)sulfoniumylidene]-1,4-phenylenethio-1,4-
 phenylenethio-1,4-phenylene salt with trifluoromethanesulfonic acid (1:1)]
 (9CI) (CA INDEX NAME)
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 CRN 169836-82-2
 CMF (C25 H19 S3)n
 CCI PMS



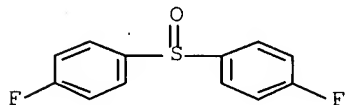
CM 2

CRN 37181-39-8

CMF C F3 O3 S



IT 395-25-5, Bis(4-fluorophenyl) sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with toluene and P2O5 in methanesulfonic acid)
 RN 395-25-5 CAPLUS
 CN Benzene, 1,1'-sulfinylbis[4-fluoro- (CA INDEX NAME)]

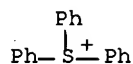


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 CC 35-5 (Chemistry of Synthetic High Polymers)
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 167401-91-4P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of monomers for polymeric sulfonium salts)
 IT 167401-88-9P 167401-89-0P 167401-90-3P
 169836-80-0P 169836-81-1P 169836-83-3P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of polymeric sulfonium salts)
 IT 395-25-5, Bis(4-fluorophenyl) sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with toluene and P2O5 in methanesulfonic acid)

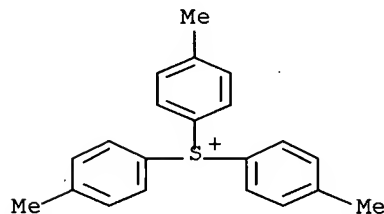
L53 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:138734 CAPLUS Full-text
 DOCUMENT NUMBER: 112:138734
 TITLE: Synthesis of triarylsulfonium salts

INVENTOR(S): Dektar, John Louis; Hacker, Nigel Patrick
 PATENT ASSIGNEE(S): International Business Machines Corp., USA
 SOURCE: Eur. Pat. Appl., 5 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

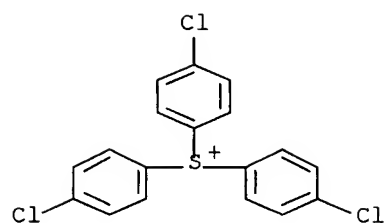
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 327194	A1	19890809	EP 1989-300075	19890105
EP 327194	B1	19920708		
R: DE, FR, GB				
JP 02001469	A	19900105	JP 1988-316571	19881216
JP 06015524	B	19940302		
US 4980492	A	19901225	US 1989-317235	19890228
PRIORITY APPLN. INFO.:			US 1988-152729	A 19880205
ED Entered STN: 13 Apr 1990				
AB The title compds. are prepared by the reaction of an aryl Grignard reagent with a diaryl sulfoxide using a solvent (mixture of aliphatic and aromatic hydrocarbons) followed by metathesis with ZMF6 (Z = metal or metal-like; M = As, P, Sb) in a nonaq. solvent. Ph3S+Br- (prepared from PhMgBr and Ph2SO) and NH4+PF6- were mixed in MeCN and stirred for 15 h to give 86% Ph3S+PF6-.				
IT 3353-89-7P 3744-11-4P 125428-43-5P				
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and metathesis reaction of)				
RN 3353-89-7 CAPLUS				
CN Sulfonium, triphenyl-, bromide (1:1) (CA INDEX NAME)				



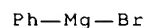
RN 3744-11-4 CAPLUS
 CN Sulfonium, tris(4-methylphenyl)-, bromide (9CI) (CA INDEX NAME)



RN 125428-43-5 CAPLUS
 CN Sulfonium, tris(4-chlorophenyl)-, bromide (9CI) (CA INDEX NAME)



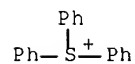
IT 100-58-3P, Phenylmagnesium bromide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction with diaryl sulfoxides)
 RN 100-58-3 CAPLUS
 CN Magnesium, bromophenyl- (CA INDEX NAME)



IT 57835-99-1P 57840-38-7P 62770-64-3P
 125853-08-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 57835-99-1 CAPLUS
 CN Sulfonium, triphenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

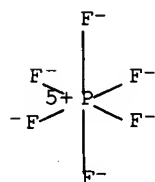
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CM 2

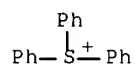
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 CMF F6 P
 CCI CCS



RN 57840-38-7 CAPLUS
 CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) (CA INDEX NAME)

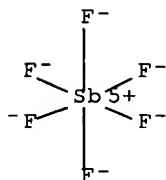
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CRN 18393-55-0
 CMF C18 H15 S



CM 2

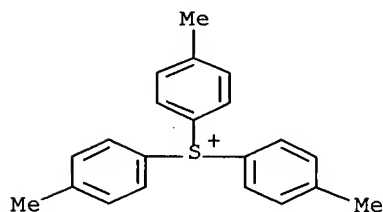
CRN 17111-95-4
 CMF F6 Sb
 CCI CCS



RN 62770-64-3 CAPLUS
 CN Sulfonium, tris(4-methylphenyl)-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

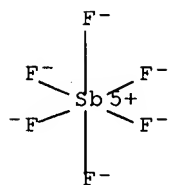
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 CMF C21 H21 S



CM 2

CRN 17111-95-4
 CMF F6 Sb

CCI CCS



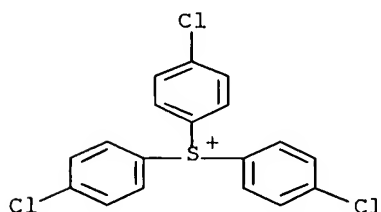
RN 125853-08-9 CAPLUS

CN Sulfonium, tris(4-chlorophenyl)-, (OC-6-11)-hexafluoroantimonate(1-) (9CI)
(CA INDEX NAME)

CM 1

CRN 125853-07-8

CMF C18 H12 Cl3 S

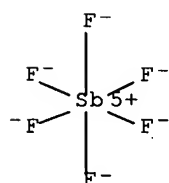


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CMF F6 Sb

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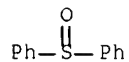


IT 945-51-7, Diphenyl sulfoxide

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenylmagnesium bromide)

RN 945-51-7 CAPLUS

CN Benzene, 1,1'-sulfinylbis- (CA INDEX NAME)

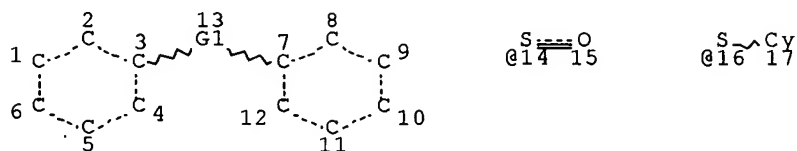


IC ICM C07C149-46
 CC 25-9 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 IT 3353-89-7P 3744-11-4P 125428-43-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and metathesis reaction of)
 IT 100-58-3P, Phenylmagnesium bromide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction with diaryl sulfoxides)
 IT 57835-99-1P 57840-38-7P 62770-64-3P
 125853-08-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 945-51-7, Diphenyl sulfoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phenylmagnesium bromide)

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SEARCH HISTORY

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L5 STR



VAR G1=14/16

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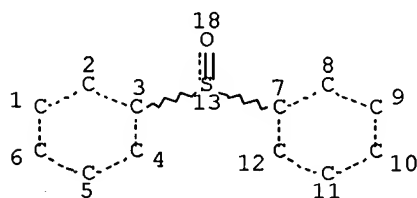
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STEREO ATTRIBUTES: NONE

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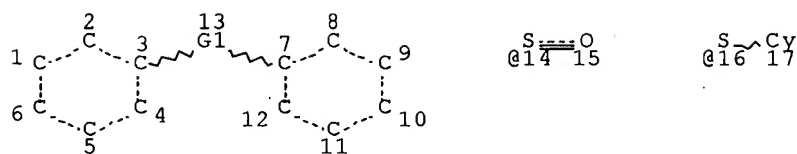
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VAR G1=14/16

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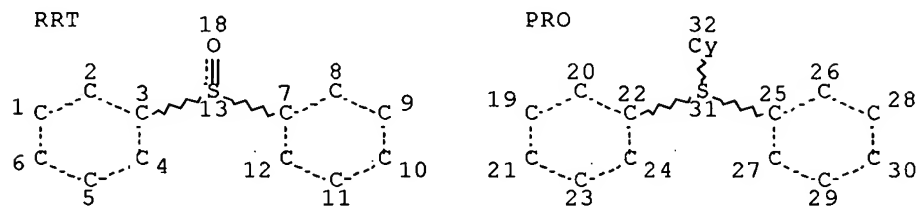
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

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100.0% DONE 1547 VERIFIED 114 HIT RXNS

19 DOCS

SEARCH TIME: 00.00.01

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E US2006-576299

E US2006-576299/APPS

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SEL RN

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95-46-5/BI)
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L3
L4 50 SEA SSS SAM L3
L5 STR L3
L6 50 SEA SSS SAM L5
L7 232246 SEA SSS FUL L5 EXTEND
L8 7723 SEA SSS FUL L5
SAVE TEMP L8 NWA299FULL/A
L9 STR L5
L10 50 SEA SUB=L8 SSS SAM L9
L11 3920 SEA SUB=L8 SSS FUL L9 EXTEND
L12 3717 SEA SUB=L8 SSS FUL L9
SAVE TEMP L12 NWA299RRT/A
L13 4006 SEA ABB=ON L8 NOT L12
SAVE TEMP L13 NWA299PRO/A

FILE 'CAPLUS' ENTERED AT 11:10:56 ON 10 JUL 2007

L14 664 SEA ABB=ON L13/P
L15 3586 SEA ABB=ON L12
L16 228 SEA ABB=ON L14 AND L15
L17 1113 SEA ABB=ON L15(L) RACT/RL
L18 206 SEA ABB=ON L17 AND L14

FILE 'REGISTRY' ENTERED AT 11:11:31 ON 10 JUL 2007

L19 15019 SEA ABB=ON MG/ELS AND X/ELS

FILE 'CAPLUS' ENTERED AT 11:11:47 ON 10 JUL 2007

L20 113786 SEA ABB=ON L19
L21 1 SEA ABB=ON L18 AND L1
L22 17 SEA ABB=ON L18 AND L20
L23 0 SEA ABB=ON L20 AND L1
L24 138 SEA ABB=ON SUMINO M?/AU
L25 255 SEA ABB=ON FUKASAWA K?/AU
L26 102 SEA ABB=ON IMAZEKI S?/AU
L27 21673 SEA ABB=ON WATANABE T?/AU
L28 1 SEA ABB=ON L24 AND L25 AND L26 AND L27
L29 8 SEA ABB=ON (L24 OR L25 OR L26 OR L27) AND L18
L30 8 SEA ABB=ON (L29 OR L1)
D SCAN L28
L31 2843 SEA ABB=ON GRIGNARD REAGENTS/CT
L32 3 SEA ABB=ON L31 AND L18

FILE 'REGISTRY' ENTERED AT 11:15:58 ON 10 JUL 2007
 D SCAN L2
 E CHLOROTRIMETHYLSILANE/CN
 L33 21 SEA ABB=ON CHLOROTRIMETHYLSILANE?/CN

FILE 'CAPLUS' ENTERED AT 11:17:30 ON 10 JUL 2007
 L34 11637 SEA ABB=ON L33
 L35 11 SEA ABB=ON L34 AND L18

FILE 'REGISTRY' ENTERED AT 11:18:11 ON 10 JUL 2007
 L36 182683 SEA ABB=ON SI/ELS AND X/ELS AND C/ELS

FILE 'CAPLUS' ENTERED AT 11:19:01 ON 10 JUL 2007
 L37 117457 SEA ABB=ON L36
 L38 21 SEA ABB=ON L18 AND L37
 L39 27 SEA ABB=ON (L22 OR L32 OR L35 OR L38) NOT L30

FILE 'CASREACT' ENTERED AT 11:20:39 ON 10 JUL 2007
 L40 684 SEA ABB=ON L8
 L41 8 SEA ABB=ON SUMINO M?/AU
 L42 3 SEA ABB=ON FUKASAWA K?/AU
 L43 2 SEA ABB=ON IMAZEKI S?/AU
 L44 410 SEA ABB=ON WATANABE T?/AU
 L45 1 SEA ABB=ON (L41 OR L42 OR L43 OR L44) AND L40
 D SCAN
 L46 STR L9
 L47 0 SEA SUB=L40 SSS SAM L46 (0 REACTIONS)
 L48 301 SEA SUB=L40 SSS FUL L46 (1547 REACTIONS) EXTEND
 L49 19 SEA SUB=L40 SSS FUL L46 (114 REACTIONS)
 SAVE TEMP L49 NWA299CASRE/A

FILE 'STNGUIDE' ENTERED AT 11:23:51 ON 10 JUL 2007

FILE 'CASREACT' ENTERED AT 11:24:25 ON 10 JUL 2007
 D QUE NOS L45

FILE 'CAPLUS' ENTERED AT 11:24:25 ON 10 JUL 2007
 D QUE NOS L30

FILE 'CASREACT, CAPLUS' ENTERED AT 11:24:25 ON 10 JUL 2007
 L50 8 DUP REM L45 L30 (1 DUPLICATE REMOVED)
 ANSWER '1' FROM FILE CASREACT
 ANSWERS '2-8' FROM FILE CAPLUS
 D IALL 1
 D IBIB ED ABS HITSTR HITIND 2-8

FILE 'REGISTRY' ENTERED AT 11:26:34 ON 10 JUL 2007
 D STAT QUE L12
 D QUE NOS L13

FILE 'CAPLUS' ENTERED AT 11:26:35 ON 10 JUL 2007
 D QUE NOS L22
 D QUE NOS L32
 D QUE NOS L35
 D QUE NOS L38
 L51 27 SEA ABB=ON (L22 OR L32 OR L35 OR L38) NOT L30

FILE 'CASREACT' ENTERED AT 11:26:49 ON 10 JUL 2007
 D STAT QUE L49
 L52 18 SEA ABB=ON L49 NOT L45